Food Packer

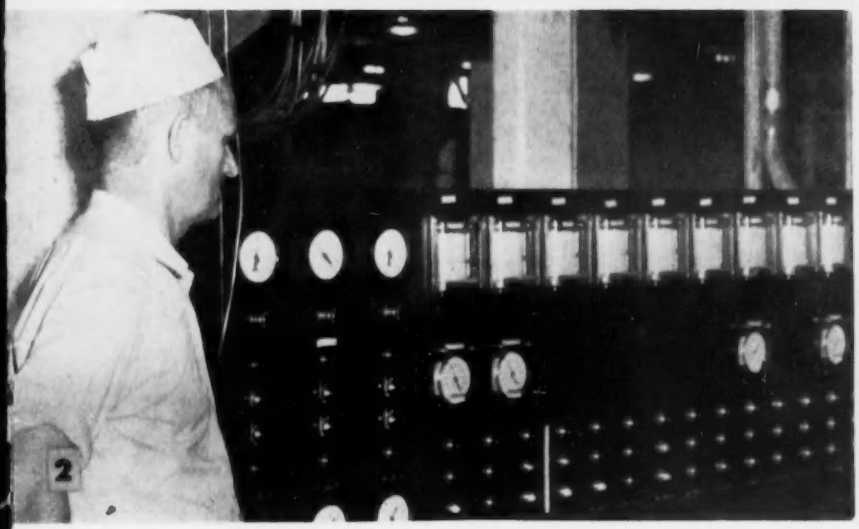
The National Magazine of Production and Management

CANNING GLASSPACKING FREEZING

A Vance Publication

August, 1957

Man of the Month
Talcott T. Hopkins



1. Pilot Plant Tests Quality – Page 22

2. Panel Regulates Pea Flow – Page 20

3. Variable Intake Speeds Cherry Pack – Page 28

New Plastic Color Standards – Page 19

Time-Temperature Indicator for Frozen Food – Page 32

New Hazel-Atlas research in glass puts three "Imps" to work for you . . .

Whether you pack food or beverage—three Hazel-Atlas "Imps" will produce more sales *imp*act, and more *imp*ulse sales in beautiful new H-A containers like these.

Your foods' appetizing color and shape are salesmen with *silver tongues,* when you let them speak for themselves in a beautiful H-A container. For peanut-butter and cheese spreads—a complete H-A line of brilliantly decorated and plain re-use tumblers. Sparkling flint jars for baby foods, relish, olives and pickles, honey, vegetables and fruit.

Rigid quality-controls keep your H-A containers uniform in size, shape, clarity and color. They perform efficiently on the filling line and display your product at its best. You are sure of fast, dependable delivery during sales peaks and emergencies, served by H-A's nationwide network of glass plants and warehouses. Ask your H-A representative or call your nearest H-A office, today.

...glamour in glass!

HAZEL-ATLAS GLASS

division of **CONTINENTAL CAN COMPANY**

WHEELING, WEST VIRGINIA

REX® AND GLOBE®

CORN SYRUPS

REX—high in total sugar content, lowest viscosity of all corn syrups, easy to handle.

GLOBE—medium or regular conversion, available in a wide range of viscosities.

Hold true fruit flavor longer.
Preserve natural fruit color.
Assure excellent eating qualities.
Are uniformly high in quality.

Corn Products technical men are always at your service. Contact our nearest sales office, or write:

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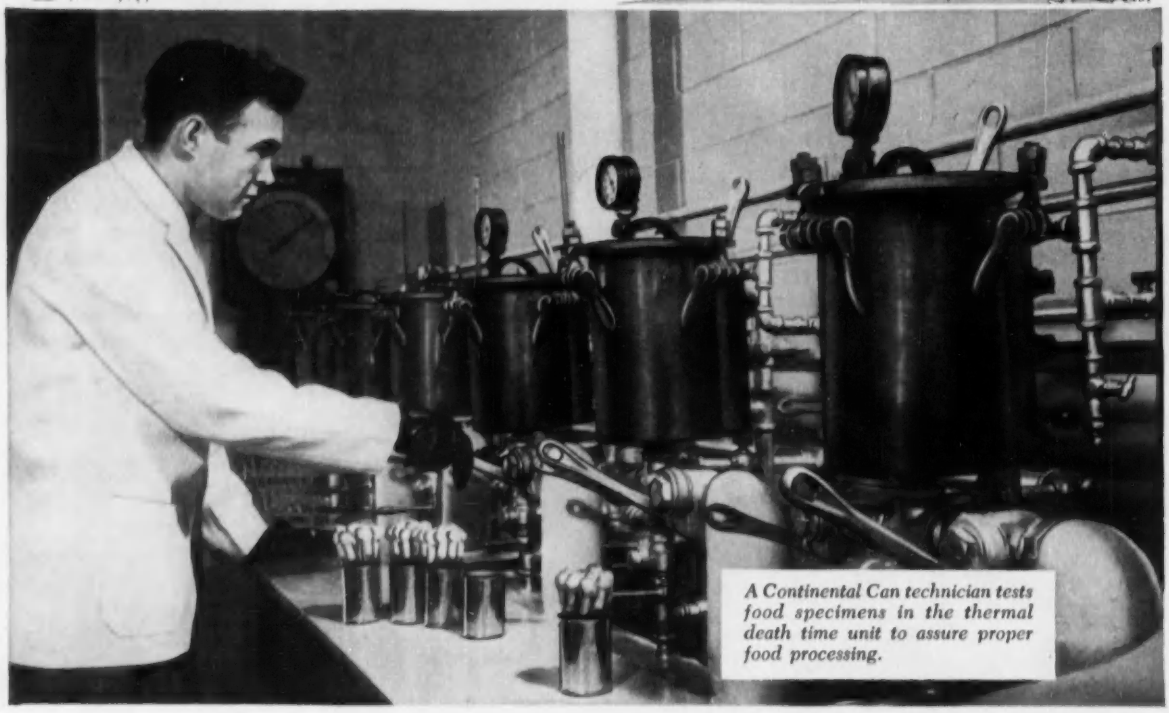
SALES COMPANY
17 BATTERY PLACE
NEW YORK 4, N. Y.

Makers also of CERELOSE® *brand dextrose for the Canning Industry.*

*Report from Continental's new Research Center**



A Continental Can technician tests food specimens in the thermal death time unit to assure proper food processing.

THERMAL DEATH TIME SYSTEM HELPS IMPROVE PROCESSING OF CANNED FOODS

The thermal death time unit is a vital part of Continental's research program to improve canned food processing. Continental's process engineers use this system to determine the most effective means of killing food-spoiling bacteria.

First, tests are made on food specimens that have been inoculated with typical food spoilage organisms. Placed in cotton plugged tubes, these specimens are rapidly heated and cooled with steam operated equipment. Temperatures for this study range as high as 270 degrees F.

Later the research scientists repeat the experiment, duplicating actual commercial production, processing the food in small cans. After a period of incubation, researchers check to see which organisms survive a given time and temperature of heat sterilization.

These exhaustive studies enable Continental's engineers to recommend the best method for processing canned foods. If you have a processing problem . . . call us. Our engineers will welcome the opportunity to help you solve it.

***TOP AWARD WINNER**

For the excellence of its modern, scientific design, Continental's new $7,500,000 Chicago research center has won the honor award of the Chicago chapter of the American Institute of Architects and the Chicago Association of Commerce and Industry.

QUALITY Continental SERVICE

CONTINENTAL CAN COMPANY

Eastern Division: 100 E. 42nd St., New York 17
Central Division: 135 So. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4

Food Packer

August 1957

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Labels did not stick for D. E. Winebrenner Co. at Hanover, Pa. Now, heated, felt-covered conveyor delivers cans absolutely dry.

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Events to Come

Aug. 3-7. International Food Show, Municipal Auditorium, Atlanta, Ga.

Sept. 8-11. National Frozen Food Merchandising Convention and Exposition, Hotel Sherman, Chicago, Ill.

Oct. 10-12. Florida Canners Assn., 26th annual meeting, Americana Hotel, Bal Harbour, Fla.

Oct. 14-16. Sanitation Maintenance Show and Conference, Navy Pier, Chicago, Ill.

Nov. 4-6. Iowa-Nebraska Canners Assn., Fall meeting, Hotel Ft. Des Moines, Des Moines, Ia.

Nov. 7. Illinois Canners Assn., Fall meeting, LaSalle Hotel, Chicago, Ill.

Nov. 11-12. Wisconsin Canners Assn., 53rd annual convention, Schroeder Hotel, Milwaukee, Wis.

Nov. 20-22. Indiana Canners Assn., annual meeting, French Lick-Sheraton Hotel, French Lick, Ind.

Nov. 21-22. Michigan Canners & Freezers Assn., Fall meeting, Pantlind Hotel, Grand Rapids, Mich.

Nov. 24-25. Pennsylvania Canners Assn., Yorktowne Hotel, York, Pa.

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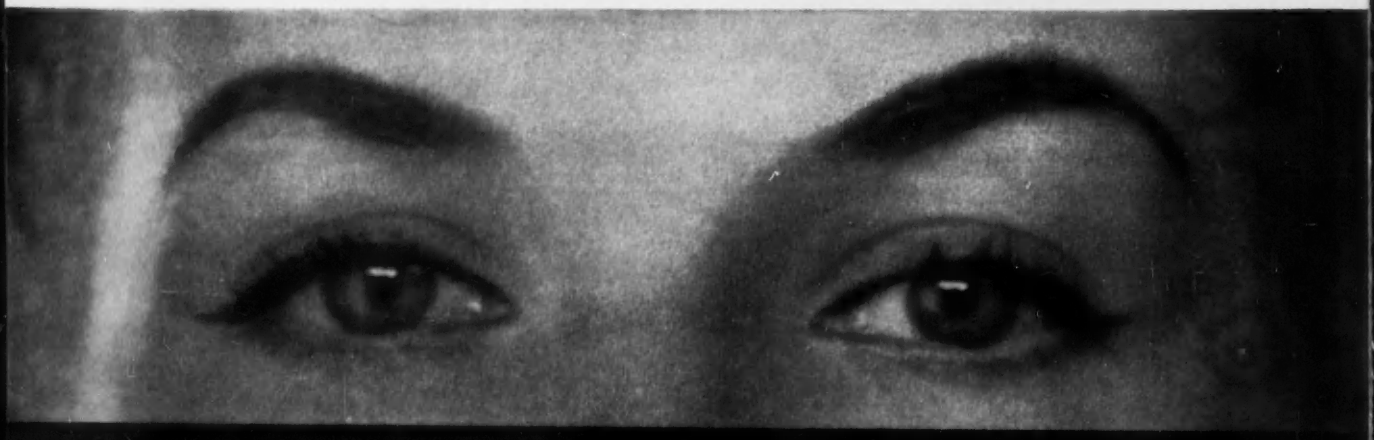
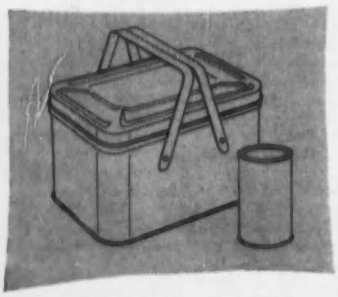
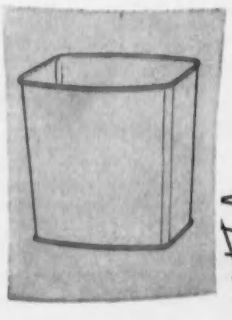
The Eyes Have It..

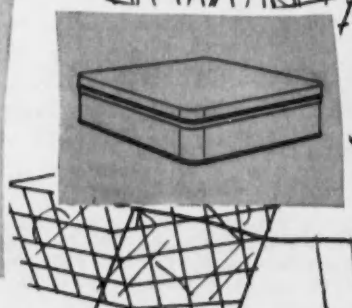


THE EYES THAT BUY YOUR PRODUCT

WHATEVER goes into a metal can . . . from beer to beans . . . pears to pretzels . . . soaps to soups . . . it is best sold with Heekin Product Planned Cans. The end result of your efforts may be a perfectly produced product, an economically produced product . . . in the right size package to please prospective customers, BUT . . . your product must still sell *right off the shelf*. Buy appeal is eye appeal . . . especially the first sale. Get the advice of experts at Heekin . . . benefit from Heekin's fifty-six years of packaging experience. You'll like Heekin Personal Service.







HEEKIN
Product Planned
CANS

THE HEEKIN CAN CO. *PLANTS IN OHIO, TENNESSEE & ARKANSAS—SALES OFFICES; CINCINNATI, OHIO; SPRINGDALE, ARKANSAS*

Something special in color!

That's what it takes in today's Battle of the Grocery Shelf. Label color that draws the shopper to *your* brand — makes her *want* — makes her *buy*. And Muirson's exclusive "nature-color" reproduction *is* special, because Muirson specializes in just one thing — *labels that sell*. Worth investigating.

because MUIRSON *specializes* in LABELS

This page produced in its entirety by Muirson Label Co. Inc.
Complete plants in San Jose, Calif., Peoria, Ill., and Meriden, Conn.

Industry Names and News

C. Van Schaick

J. Roy Duggan

Clarence L. Van Schaick, formerly president of Dixie Cup Co., has been elected a vice president of American Can Co. The cup company's operations were recently merged with the can company's.

J. Roy Duggan, vice president of the SeaPak Corp., St. Simons Island, Ga., has been appointed by Governor Marvin D. Griffin of Georgia as the state industry member of the Atlantic States Marine Fisheries Commission. In addition to this appointment, Mr. Duggan is currently chairman of the National Shrimp Congress, president of the Southeastern Fisheries Association and a director of the National Fisheries Institute.

Walter S. Barlow has been appointed as director of quality control and product research for Southland Frozen Foods, Inc. The New York firm has processing plants in Florida, New York and Tennessee.

William B. Traynor has retired as chairman of board and director of Libby, McNeill & Libby. **Harold W. Souther,** a vice president of the company, has been elected to succeed him. The office of chairman of board will be discontinued.

Durkee Famous Foods Division of the Glidden Co. has leased a modern one-story plant in the Bethlehem-Allentown area of Pennsylvania for the relocation of its Long Island spice, cocoanut and condiment production facilities.

New York State Canners and Freezers Association, Inc. will hold its 72nd annual convention Dec. 5-6, 1957 at the Hotel Statler, Buffalo. The meeting is set earlier this year in order to avoid conflict with the National Food Brokers Association sales conference which begins Dec. 14 in Chicago.

George W. Crabtree has been appointed general manager, container division, of Campbell Soup Co. Mr. Crabtree was formerly executive vice president of Crown Cork & Seal Co., Inc., Baltimore, Md.

The William W. Wurm Co., Chicago food broker, has added to its sales organization, **Minot (Ben) Bennett,** former national sales manager of Greenwood Foods, Inc., Waterloo, N. Y.

Two district sales managers for **John H. Dulany and Son, Inc.** have been appointed by William H. McKenney, director of marketing. They are Theodore A. Themak, Jr. of Philadelphia and Raymond J. LaPlante of New Orleans.

R. B. Johnson

H. E. Meinhold

Ralph B. Johnson, executive vice president of the National-American Wholesale Grocers Association, has been appointed vice president in charge of marketing of H. J. Heinz Co., a newly-created position.

H. E. Meinhold, president, Duffy-Mott Co., Inc., has been elected president of the Processed Apples Institute, Inc. **J. E. Klahre,** Apple Growers Association, was elected one of three vice presidents. **L. W. Brown,** National Fruit Product Co., Inc. and **E. J. Yoder,** C. H. Musselman Co., were re-elected vice presidents. **J. J. Tormey,** Lyndonville Canning Co., Inc., was elected treasurer. **J. Pinckney Arthur,** Shenandoah Valley Apple Cider & Vinegar Corp., secretary.

Jules Martin of Coastal Valley Canning Co., Oxnard, was elected president of the Southern California Food Processors Association at its recent annual meeting. **W. E. Beach** of Burbank was elected treasurer and **Elmer H. Howlett,** Los Angeles, was re-elected secretary.

David E. Stine, general manager of Continental Can Co. in Mexico, has been named manager of the Dole Hawaiian Pineapple Co.'s can plant in Honolulu. He will direct the company's can-making facility which produces nearly 400 million cans annually for Dole pineapple products.

Michael J. Edwards has recently joined the sales staff of Flotill Products, Inc., Stockton, Calif., as southern sales representative. Flotill has also announced the appointment of King Brokerage Co., Inc., Los Angeles, as exclusive broker for Southern California. Beren Food Sales has been appointed Flotill's broker for the state of Arizona.

The Tri-Valley Packing Association, one of California's major independent canners and among the largest of grower-owned canning associations, with headquarters in San Francisco, is celebrating its Silver Anniversary. Festivities will be centered in Modesto where a new warehouse has just been completed.

Vernay Reindoller, formerly with Green Giant Co., has joined the Fuhremann Canning Co., Mayville, Wis., as general sales manager.

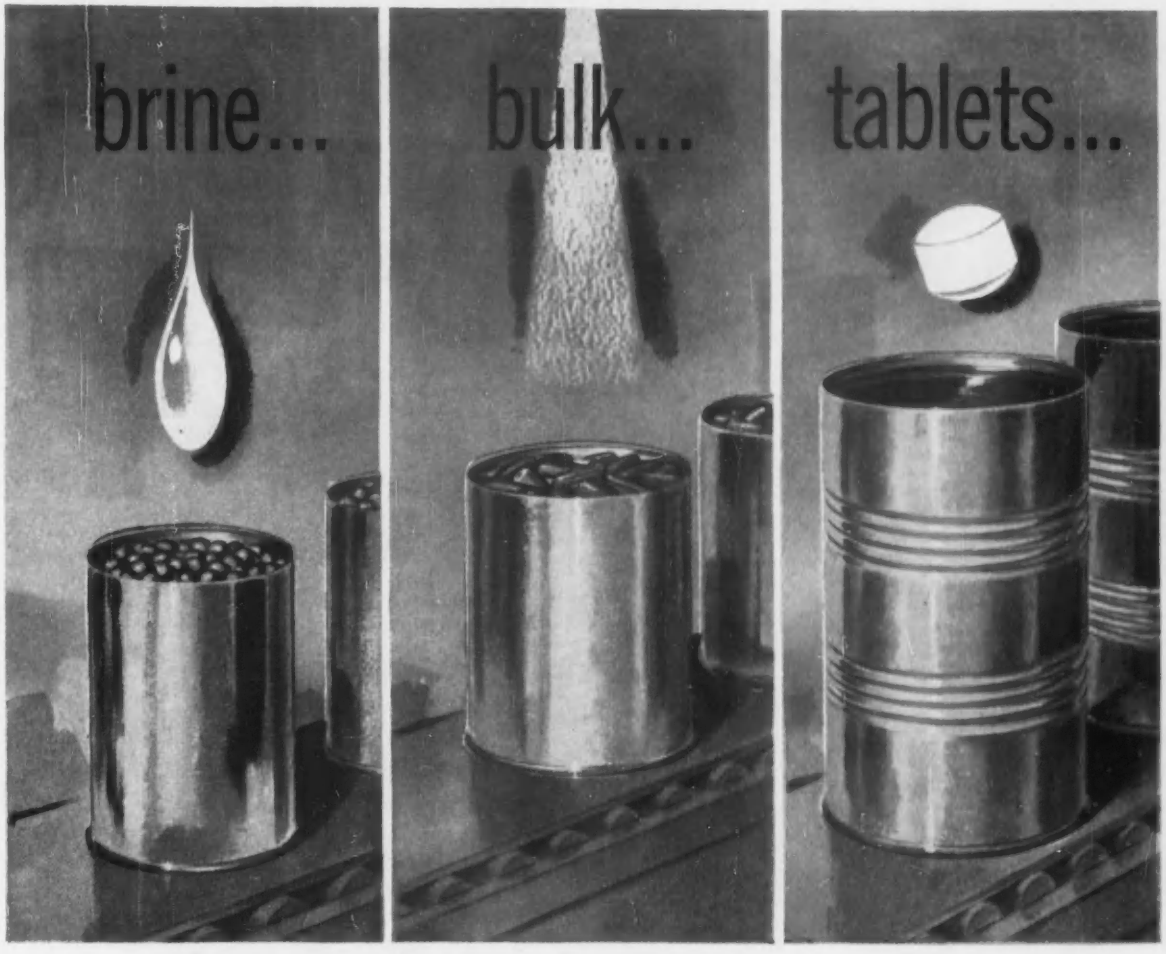
James A. Cleveland, former manager of the Canning Machinery Division of Food Machinery & Chemical Corp.'s eastern operation in Hoopeston, Ill., died June 24 after a long illness.

E. K. Brass

John Gault

Edward K. Brass, vice president, Guaranty Trust Co., New York, has been elected to the board of directors of Booth Fisheries Corp.

Maine sardine packers recently honored **John Gault** of Portland, American Can Co. official, who has retired after 37 years with that firm. Sixty-five attended a testimonial luncheon for Mr. Gault at Bangor on "John Gault Day" and he was given a scroll bearing the signatures of his sardine industry friends plus a gift. He will be succeeded as Maine sales manager for Canco by his assistant, **Robert Kinne.**



Now! Three ways to add Morton '999' Salt

Morton now offers you a single grade of high purity salt for all forms of dispensing. Morton '999' Salt is ideal for bulk use and brine because it is a cube type salt that won't break up in shipment and will dissolve uniformly. '999' also has a practically constant weight per volume and is easily and accurately dispensed by machine.

Morton '999' also comes in 10-grain to 400-grain tablets. (Trade name: Scienco Salt Tablets.)

No matter in which form you use Morton '999', you protect flavor. For '999' is a low cost, high purity salt, free from bitter calcium and magnesium compounds that can distort food flavor. Morton '999' is always 99.9% clean, pure sodium chloride, exceptionally low in the objectionable trace metals, copper and iron.

For more information about Morton '999' Salt and for ways in which you can dispense it most effectively, write:

MORTON SALT COMPANY
INDUSTRIAL DIVISION
Dept. FP-8, 120 So. LaSalle Street, Chicago 3, Illinois

glass containers move

...because they are preferred

HOUSEWIVES prefer products packed in glass because glass is transparent . . . it permits them to see what they buy before they buy . . . shows to full advantage the color, size, shape and texture of the contents. They prefer glass because it protects the contents . . . is clean and sanitary . . . imparts no foreign tastes, flavors or aromas to contents. And they prefer the glass package because it is convenient . . . easy to open and reseal, permits safe storage of unused portions and affords a visual inventory. Take advantage of this preference—pack in glass—watch your products move in greater quantities off the shelves, through the check-out, into the home.

Use **Anchorglass**® *containers sealed with* Anchor® *caps*

ANCHOR HOCKING

GLASS CORPORATION

more food!

by housewives

Lancaster, Ohio

Citrus Commission Objects to Processor Advertising

The Florida Citrus Commission filed formal complaints with federal and state agencies protesting "false and misleading" advertising and labeling by a Florida citrus processor.

The letters were filed with the Federal Trade Commission, the U. S. Food and Drug Administration, and the Tennessee Department of Agriculture, Division of Food and Drugs. They charged Hi-Ester Corporation of Florida, DeLand, with having misrepresented their product as "fresh orange juice" when in fact, water, vitamins, sucrose and acids has been added.

It was noted also that the Hi-Ester Corporation produces frozen orange concentrated juice in Florida and ships the product to a plant in Chattanooga where it is reconstituted as orange juice, packaged in cartons, and marketed through dairies and retail outlets.

City Waste Water for Irrigation

Purification of city sewage water has reached the stage where California scientists feel that it may be practical for use on cropland.

The college of agriculture at the University of California, Berkeley, announced that a growing scarcity of new fresh water supplies in California has prompted a study to make new water from old.

As purification techniques are improved, reclaimed water may also find use by industries, and might even be suitable for return to domestic water supplies in some areas.

Projects in water use on the Berkeley campus include those concerned with producing an algal-bacterial animal feed supplement in the process of reclaiming water. The feasibility and safety of reclaiming waste water by injecting it directly into underground water-bearing strata are being studied.

Dr. H. D. Brown Retires from Ohio University

Dr. Howard D. Brown, professor of horticulture at Ohio State University, has announced his retirement. He will become research coordinator for the National Potato Chip Institute.

In his work at the university, Dr. Brown has made contributions over several fields. Some of the most important include vegetable pruning and breeding, potato apical dominance, strain and variety tests, irrigation, processing vegetables and fruits, hydroponics, nutrition, storage, soil fertility tests, and trace element studies.

Blue Mountain Industry Celebrates 25 Years

The Blue Mountain Processing industry of Oregon and Washington celebrated its first 25 years at a commemorative luncheon in Walla Walla in June. It is now one of the most productive processing areas of the United States. Beginning as a small experiment in 1932 sponsored by the Walla Walla Chamber of Commerce, the canning and freezing industry in the Blue Mountain Area now extends from Pendleton, Ore. to Lewiston, Ida. and includes 16 highly mechanized processing plants. During the past year, approximately 8 million

(*Continued on Page 37*)

M. P. Verhulst, executive secretary of the Wisconsin Canners Association, guided four Badger beauties on a tour of the Oconomowoc Canning Company's Sun Prairie plant. The girls visited the plant as part of a program to acquaint them with various phases of Wisconsin industry. One will be chosen the reigning Alice-In-Dairyland.

A report on the

DIETETIC MARKET

. . . and the vital opportunity it presents to you

This report on the rapidly accelerating dietetic market is written to every food executive who has a product in this field . . . or is thinking about having one.

As you, of course, know, this market has had a phenomenal growth—and the end is nowhere in sight. If you are about to introduce a product in this field—or if you have a product that has not grown as fast as the field—we believe you will be interested in the facts on this market that you will find on the inside pages.

These facts are presented in three sections: (1) the dietetic market itself, (2) the new trend in dieting, and (3) the vast opportunity that lies ahead.

the MARKET

The already wide market for low-calorie foods is increasing rapidly

The best estimates indicate that almost half of the adults in America are overweight or concerned about their weight—and hence are interested in low-calorie products. According to competent research, the actual figure is 49.2%. This means that over 60 million Americans will be dieting during the year—about 20 million at a time—on a constant turnover basis.

Who are these people and where do they live? They are both men and women (more women, of course) in all age groups and all occupations. As they rise in occupational group rating and in buying power their concern with overweight increases—and so does the action they take about it. People who earn more live better and eat better—but they are becoming more and more particular about how many calories they take in.

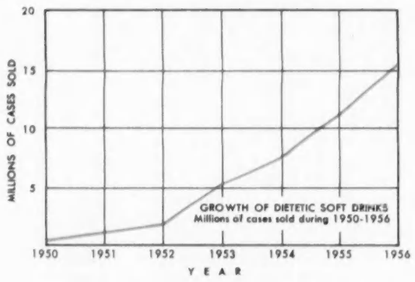
The location of overweight people or those concerned with overweight is nation-wide—showing little sectional difference. As you might expect, people living in the larger cities tend to be more interested in the dietetic products, but the spread from the rural districts to the largest cities is relatively small.

The interesting thing to food and beverage processors is that this market is the fastest growing market in the food industry today, and there is nothing on the horizon to indicate a slow-up.

Food Store Operators Recognize Trend

The food store operators are aware of the potential profits in dietetic foods—and are giving this new field both ad and shelf space. Today there is virtually no major food store in the country without a low-calorie food section—and these sections are expanding in shelf space at a time when shelf space is at an all-time premium. As an example, dietetic foods increased 17% in shelf space during a period when canned fruits lost 79% of their shelf space. Dietetic foods also gained over cereals, baby foods and canned juices. Super market buyers themselves have obviously decided that the greater profit, demand and turnover of low-calorie foods have earned this added shelf space.

In the June 1956 issue of Food Topics it shows that dietetic foods have "an average profit return of $1.07 per square foot of floor space—compared to 37¢ for baby foods and 28¢ for cold cereals."

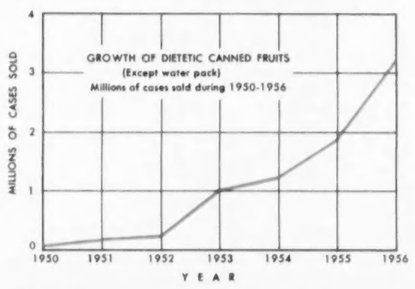


The list of dietetic foods found in typical sections is long and growing longer. In one typical food store in Baltimore, for instance, we counted over 200 food and beverage items that would appeal to the dieter.

Not all of these are "low-calorie" foods; some are simply salt-free. But they mass together to make a special diet section where more and more women are doing their everyday food buying. Bottlers of soft drinks are well represented and so are canned fruits, jellies, jams, preserves, ice cream, puddings, cake mixes.

$250,000,000 Volume

In terms of dollar volume, at retail, careful estimates suggest that the total market for all types of dietetic foods

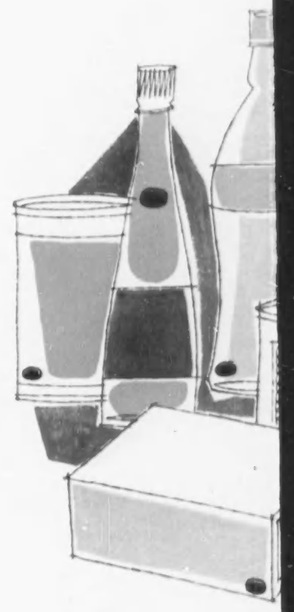


and beverages is now about $250,000,000. This is an estimate, of course, but we believe the estimate to be reasonably reliable. The dietetic product is *already* a staple.

the OPPORTUNITY

Make the most of the dietetic market with Sucaryl®

(it's the non-caloric sweetener your customers already know and use)



Dramatic new opportunities are all-important in the ever-changing food business. Dietetic foods are today's opportunity.

The low-calorie foods business asks the food store operator for no other investment than shelf space. And this he's proved quite willing to give. The idea of dieting has been pre-sold to the public by every medium that influences American thinking. You or anyone going into the low-calorie market today can take advantage of a more specific kind of pre-selling. This is the pre-selling that has been done by Sucaryl, the non-calorie sweetener that leaves no bitter aftertaste. More than all other brands put together, Sucaryl means "calorie-free sweetness" to the American public.

Briefly, Sucaryl is a brand of cyclamate supplied in bulk to canners and bottlers either in powder or liquid form. It has 30 and more times the sweetness of sugar, leaves no bitter aftertaste in normal concentration—contains no calories. It is completely stable to both heat and cold, entirely compatible to both natural and artificial flavors. The most important thing, perhaps, to you is that the substitution of Sucaryl for sugar ordinarily requires no change whatever in your manufacturing process.

With a product sweetened by Sucaryl you offer the public a natural tasting, fully sweetened substitute for fattening dishes or drinks—help the average dieter resist the constant temptation from life-long eating habits. You do this successfully because the average user cannot tell by taste that he is using a product with a non-caloric sweetener.

Dieters Know and Trust Sucaryl

For home and personal use, Sucaryl outsells all other branded non-caloric sweeteners combined. The use of the Sucaryl seal on your can, bottle or package prepares customers for your product before they even taste it.

SWEETENED WITH Sucaryl

No other non-caloric sweetener even approximates the volume, coverage and use-variety that characterizes Sucaryl advertising. Full color ads appear every month of the year in the magazines shown below with readership in the hundreds of millions.

Such advertising, along with the unprecedented growth of the dieting habit, has raised Sucaryl dollar sales spectacularly. They have gone up over 500% since 1951. Such figures would not have been possible had not the product been right and the market ready—both factors are of great importance to you. We sincerely believe that any low-calorie product clearly aligned with Sucaryl has an advantage over

KET

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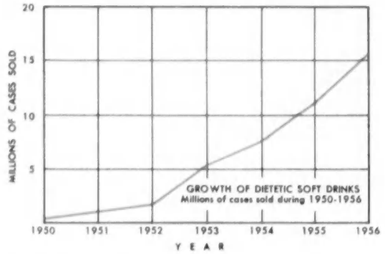
tore operators are aware of the potential tic foods—and are giving this new field both ace. Today there is virtually no major food untry without a low-calorie food section—ons are expanding in shelf space at a time e is at an all-time premium. As an example, ncreased 17% in shelf space during a period ruits lost 79% of their shelf space. Dietetic ed over cereals, baby foods and canned arket buyers themselves have obviously degreater profit, demand and turnover of lowave earned this added shelf space.

1956 issue of Food Topics it shows that die-



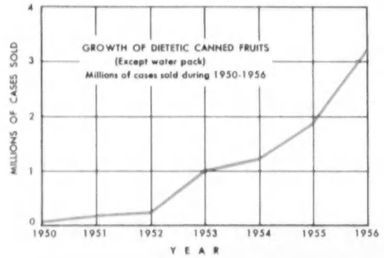
tetic foods have "an average profit return of $1.07 per square foot of floor space—compared to 37¢ for baby foods and 28¢ for cold cereals."

The list of dietetic foods found in typical sections is long and growing longer. In one typical food store in Baltimore, for instance, we counted over 200 food and beverage items that would appeal to the dieter.

Not all of these are "low-calorie" foods; some are simply salt-free. But they mass together to make a special diet section where more and more women are doing their everyday food buying. Bottlers of soft drinks are well represented and so are canned fruits, jellies, jams, preserves, ice cream, puddings, cake mixes.

$250,000,000 Volume

In terms of dollar volume, at retail, careful estimates suggest that the total market for all types of dietetic foods



and beverages is now about $250,000,000. This is an estimate, of course, but we believe the estimate to be reasonably reliable. The dietetic product is *already* a staple.

the OPPORTUNITY

Make the most of the dietetic market with Sucaryl®

(it's the non-caloric sweetener your customers already know and use)

Dramatic new opportunities are all-important in the ever-changing food business. Dietetic foods are today's opportunity.

The low-calorie foods business asks the food store operator for no other investment than shelf space. And this he's proved quite willing to give. The idea of dieting has been pre-sold to the public by every medium that influences American thinking. You or anyone going into the low-calorie market today can take advantage of a more specific kind of pre-selling. This is the pre-selling that has been done by Sucaryl, the non-calorie sweetener that leaves no bitter aftertaste. More than all other brands put together, Sucaryl means "calorie-free sweetness" to the American public.

Briefly, Sucaryl is a brand of cyclamate supplied in bulk to canners and bottlers either in powder or liquid form. It has 30 and more times the sweetness of sugar, leaves no bitter aftertaste in normal concentration—contains no calories. It is completely stable to both heat and cold, entirely compatible to both natural and artificial flavors. The most important thing, perhaps, to you is that the substitution of Sucaryl for sugar ordinarily requires no change whatever in your manufacturing process.

With a product sweetened by Sucaryl you offer the public a natural tasting, fully sweetened substitute for fattening dishes or drinks—help the average dieter resist the constant temptation from life-long eating habits. You do this successfully because the average user cannot tell by taste that he is using a product with a non-caloric sweetener.

Dieters Know and Trust Sucaryl

SWEETENED WITH Sucaryl®

For home and personal use, Sucaryl outsells all other branded non-caloric sweeteners combined. The use of the Sucaryl seal on your can, bottle or package prepares customers for your product before they even taste it.

No other non-caloric sweetener even approximates the volume, coverage and use-variety that characterizes Sucaryl advertising. Full color ads appear every month of the year in the magazines shown below, with readership in the hundreds of millions.

Such advertising, along with the unprecedented growth of the dieting habit, has raised Sucaryl dollar sales spectacularly. They have gone up over 500% since 1951. Such figures would not have been possible had not the product been right and the market ready—both factors are of great importance to you. We sincerely believe that any low-calorie product clearly aligned with Sucaryl has an advantage over one that is not. The logical thing would simply be to display Sucaryl on your label, on your store displays and in your advertising to reach the huge pre-sold dietetic market.

What To Do Next

For complete information about Sucaryl and its usefulness to you, we suggest you write for a copy of our booklet, "Making The Most Of The Dietetic Market With Sucaryl." Please address Abbott Laboratories, North Chicago, Illinois. On request, we will also send you a sufficient supply of Sucaryl for your own test purposes.

Please Send Booklet
"MAKING THE MOST OF THE DIETETIC MARKET WITH SUCARYL"

To:
NAME: _____ (Please print)
FIRM NAME: _____
ADDRESS: _____
CITY: _____ STATE: _____
YOUR TITLE: _____

Dieting is taking on a new meaning today

Once this dieting business was a fad—sometimes a dangerous one. Now, however, dieting has become a healthful way of living in millions of American homes. The public is being made aware of the fact that a sensible, sustained dieting program is the only way to achieve and maintain proper weight. Going is the old-style dieter who went on a dangerous diet for a length of time and lost a prescribed number of pounds, only to climb back on the calorie bandwagon and put the pounds back on.

The Slim Figure Is Today's Ideal

The slim figure has become an important symbol today. Doctors tell us that overweight people don't live as long as people who carry ideal weight. And more importantly, it is much more harmful to the system to take weight off and then put it back on than it is to carry on at a continued overweight level.

Supplementing the health factor is today's social emphasis on the slim figure as a symbol of style, modernity, beauty or virility, romance, healthy mental adjustment and even success.

Advertising has taken up a theme of new style dieting to sell many products. Advertising is promoting the idea that modern living implies a state of good health that comes of staying slim.

Television, magazines and newspapers are also major factors in furthering the idea of slimness, both with direct dietetic editorials and features, and with a flood of styles in fashion news. Sensible eating is probably today's No. 1 "health editorial" subject.

A Diet-Attitude Study

To learn the effect of this national educational program, Abbott Laboratories sponsored a psychological study of typical consumers. 42% said they were overweight. 49% said they were just right. Only 9% thought they were underweight. In this study, Abbott Laboratories was looking into attitudes towards weight. Abbott tried to learn why these people went on a diet, if they stayed on it, how they felt about it. Here are some of the conclusions that came out of this research:

1. The fear of being overweight is general and very real.
2. Reliance on exercise as a means of taking off weight is a negligible factor.
3. Most dieters would like to lose weight and keep weight off as painlessly as possible.
4. Most dieters recognize calorie-restriction as the logical way to stay slim.
5. Most dieters have an inordinate "sweet tooth." They would like to satisfy their craving for sweets while counting calories.
6. Most dieters (3 out of 4) give weight control as the reason for dieting. One out of 4 had other reasons--diabetes, heart conditions, pregnancy, ulcers, etc.

A National Family Opinion Study

Abbott Laboratories was interested in those dieters who used a non-caloric sweetener. For this reason in a market study in 1956 Abbott asked the National Family Opinion Panel of 2,000 families to tell how they used their non-caloric sweetener. The results:

Product Use	Sucaryl	Branded Sacch.	Unbranded Sacch.
1. Sweeten Beverages	77.6%	79.2%	92.9%
2. Dry Cereal	24.1	41.6	14.9
3. Cooking-Baking	29.0	10.4	11.0
4. Fruit	6.5	–	1.1
5. No Answer	7.5	12.5	3.3
Totals*	144.7%	143.7%	123.2%

Over 100% due to duplicate answers

Note—on items 3 and 4 above—the good percentage of dieters who prepare their own diet recipes at home. This suggests a major opportunity for any diet product that can be served right from the can, jar or package—thus eliminating kitchen preparation. In effect, a diet product becomes a *convenience* product. As you see, Sucaryl was preferred over saccharin by about 3 to 1. The significance is clear. If a canned or packaged diet food is sweetened with Sucaryl it already has a pre-sold market.

A report on the

DIETETIC MARKET

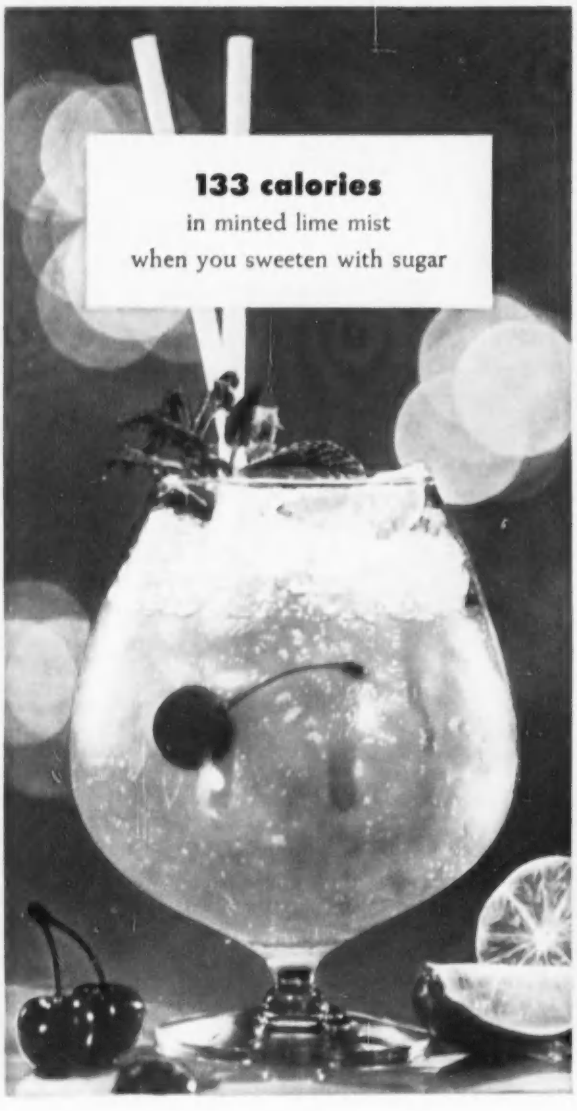
. . . and the vital opportunity it presents to you

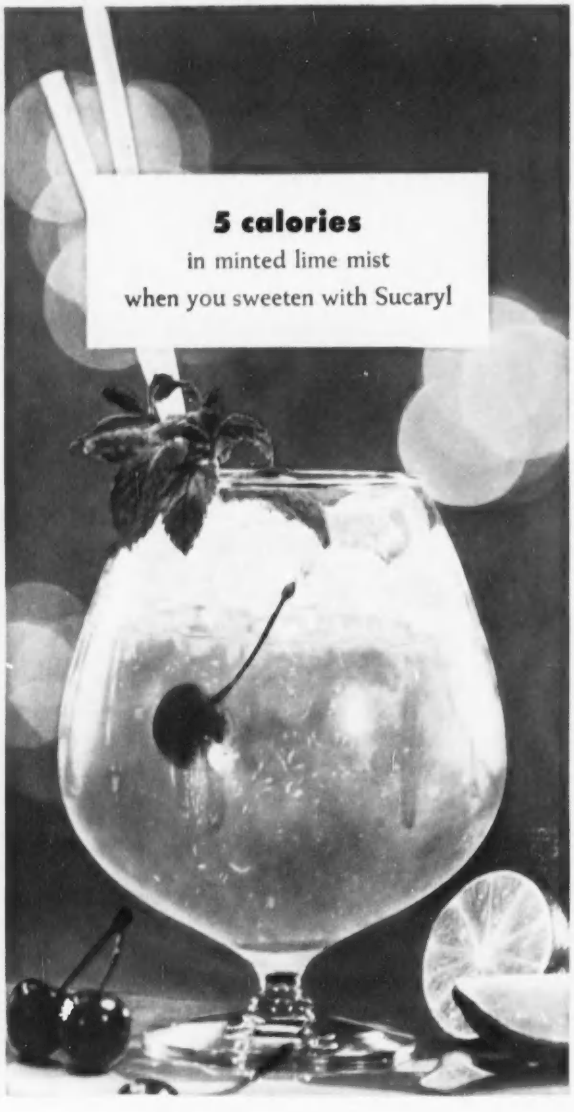
This report on the rapidly accelerating dietetic market is written to every food executive who has a product in this field . . . or is thinking about having one.

As you, of course, know, this market has had a phenomenal growth—and the end is nowhere in sight. If you are about to introduce a product in this field—or if you have a product that has not grown as fast as the field—we believe you will be interested in the facts on this market that you will find on the inside pages.

These facts are presented in three sections: (1) the dietetic market itself, (2) the new trend in dieting, and (3) the vast opportunity that lies ahead.

Here's Sucaryl's "ad-of-the-month" for July and August





You can save a lot of calories by sweetening with Sucaryl

and you can't taste the difference

Sucaryl makes it easier for you to watch your weight...by giving you wholly natural sweetness in your diet... without one single calorie. You'll find Sucaryl sweetens all your favorite summer beverages—lemonade, limeade, iced tea, iced coffee—to perfection. Use it for fruits and cereals; cook with it, bake with it; use it practically anywhere you would sugar. Any Sucaryl-sweetened dish tastes just like its sugar-sweetened twin. Sucaryl, of course, is for anyone sensibly counting his or her calories, and for those who cannot use sugar. You get Sucaryl in tablets or solution; low-salt diets call for Sucaryl Calcium.

Abbott Laboratories, North Chicago, Ill. and Montreal. Abbott

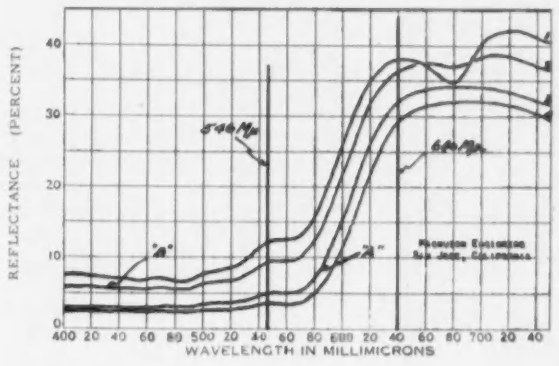
MINTED LIME MIST

- 2 cups warm water
- ½ cup fresh lime juice
- ⅛ tsp. mint extract
- 4 drops green food coloring
- 1½ teaspoons Sucaryl solution
- 1 pint dietetic lime carbonated beverage

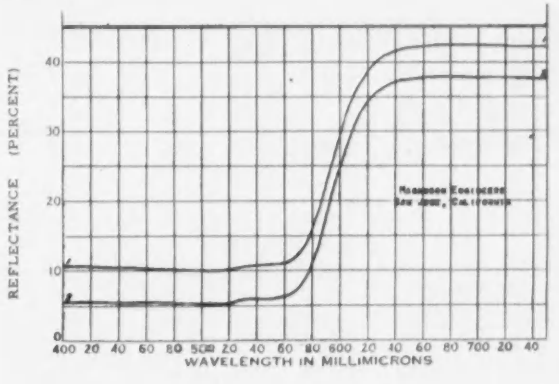
Mix all ingredients except beverage. Chill several hours in refrigerator. Add beverage, pour in glasses filled with crushed ice. Garnish with maraschino cherry, wedge of lime and fresh mint. 6 servings.

Sucaryl®

Non-Caloric Sweetener—No Bitter Aftertaste



Reflectance curves of California tomatoes are shown. From top: 1. Below minimum for California, fairly well ripened; 2. Approximate minimum; 3. Approximate California minimum, well ripened; 4. Above minimum well ripened.



Spectral reflectance of tomato-red plastic calibration material. Curve 1, (top) is direct reflectance and 2, the diffuse reflectance.

Plastic Models Are Replacing Color Grading Charts

Polystyrene standards allow objective grading with color-sensitive instruments

by George W. Ingle
Monsanto Chemical Co.

Colored plastics are being used as standards in grading fresh and processed food products. This new development in inspecting is being extended particularly in fresh fruits and vegetables and their processed products.

This application of color is devoid of aesthetics. It is restricted entirely to purposes of utility. But the dollar value dependent solely on color-judgments is enormous. Grading food products by color immediately classifies them by dollar value — and this is in a multi-million dollar industry.

This is not the first time that color standards have been used to grade the quality of food products. The U. S. Department of Agriculture has developed about 130 standards for processed products. The novelty of the polystyrene standards is that they represent precise and durable color matches designed for the first time specifically for visual and instrumental use. These color matches aim to simulate, if not match, the spectral characteristics of the food itself.

The use of modern colorants is indispensable in providing the color matches required in polystyrene. Modern colorants permit durability of color and precision of match. Organic and inorganic pigments are used rather than dyes to maximize stability.

Development of Color Standards

The development of color standards requires coordinating the skills and services from several sources. First, government agencies set up the standards. The U. S. and state departments of agriculture have accumulated experience, past performance records, and even include staff artists highly skilled in reproducing colors and textures of fruits and vegetables in several stages of maturity.

The key to the development of standards lies in the collection and spectrophotometric measurement of appropriate real standards of fruit and vegetable quality. Several food processing manufacturers are active in this field as well as the USDA's Regional Research Laboratories.

Simplified, specialized colorimeters have been developed for measuring color limits which define stages in ripening.

Colorimetric data are used in developing precise and stable color matches in polystyrene molding powders. Several of these color matches will be described here in some detail. It will be noted that each case received somewhat different treatment. They will be reviewed in approximate chronological order of their development.

Tomato Red

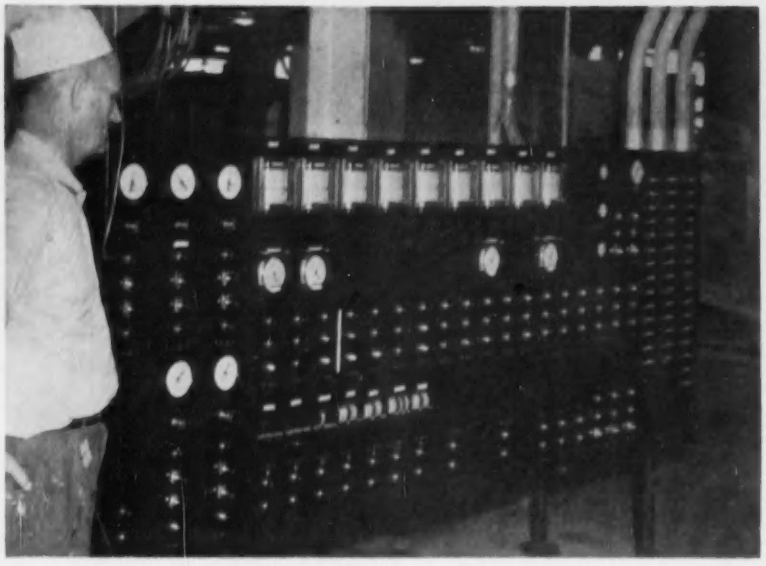
In this case, the tomatoes were intended to be color inspected by photometric measurement and calibrated against the polystyrene color standard. The standards also are useful in making visual color judgments.

The average reflectance of cut halves was to be measured at two wave lengths, 546 m_u in the green and 640 m_u in the red, obtained by filtered mercury arc and Neon gas discharge tube radiation respectively. Prior work had established that the ratio of these reflectance values related directly with tomato maturity. The higher the ratio, the greater the maturity. Figure 1 shows reflectance curves illustrating differences due to changes in maturity.

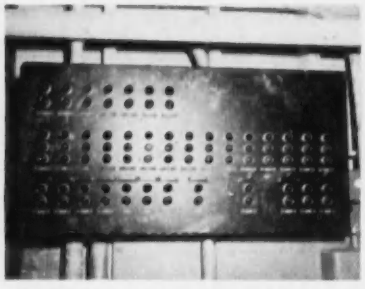
Specifications for color-matching were provided by a spectral total reflectance curve for raw tomato pulp considered "minimum" in color for canning purposes. This curve was simulated as closely as possible in polystyrene molding powder formulated with cadmium-sulfoselenide pigments in addition to titanium dioxide.

The ratio of diffuse reflectance (see figure 2) values of this polystyrene color standard at 546 m_u and 640 m_u was adjusted to conform with the average of four representative grades of tomatoes. Exact values are not necessary since the molded color standards are used only for

(*Continued on Page 42*)



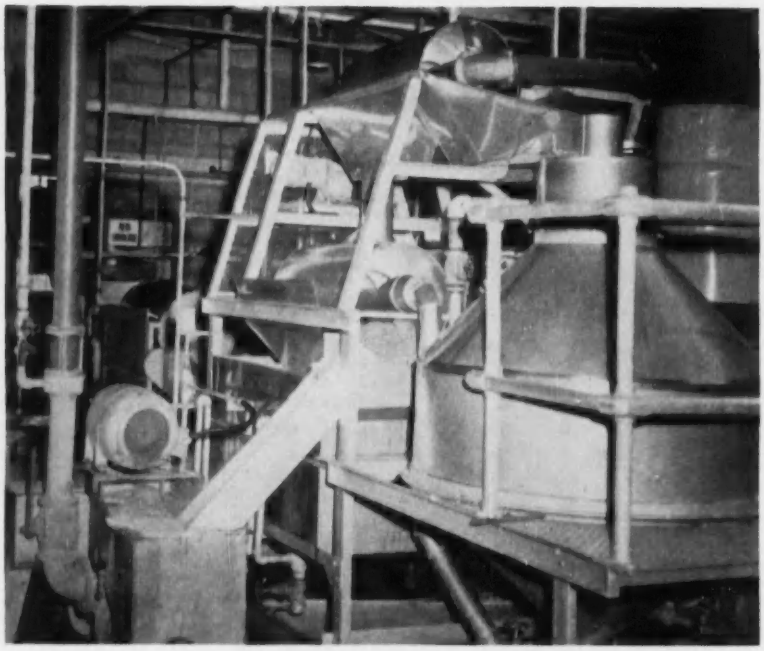
Central panel operator is responsible for continuous flow of peas through plant.



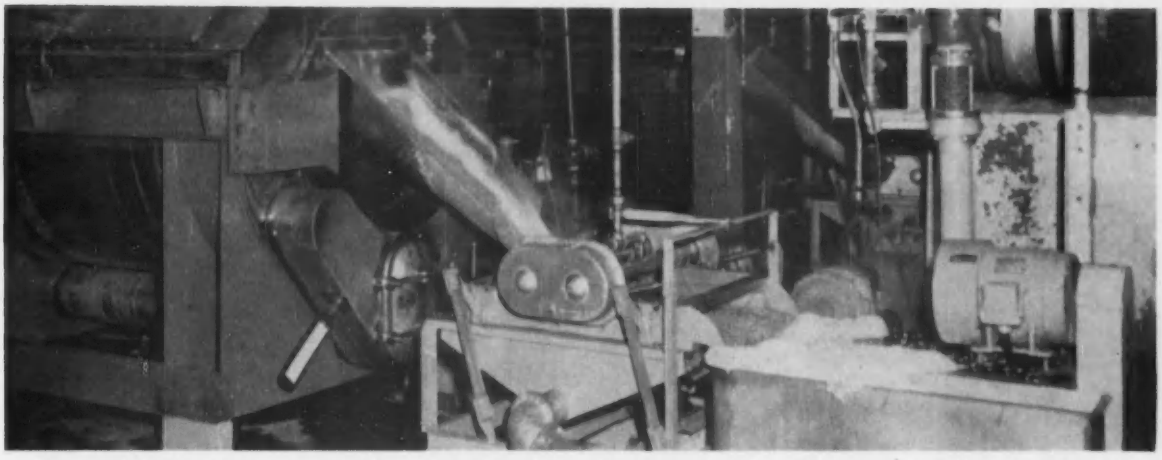
Monitor panel, wired in parallel, keeps supervisor on second floor informed.

Actual pea flow can be stopped by closing manifold on channel.

Controls are used on cooking cycle of horizontal retorts – but not on panel.



Speeds of belts, pumps, washers remain constant despite changes in rate of flow of peas. Speed of bucket elevators from receiving bins is controlled by central panel.



Two new blanchers have zone control over incoming and outgoing temperatures. Controllers are located on central panel.

Central Panel Board Controls Speed, Efficiency of Pea Line

Libby eliminates gluts and shortages in production lines, keeps quality close to standards

While control panels are becoming a standard part of modern plants, the functions are far from standardized. In the plant of Libby, McNeill & Libby of Canada, Ltd. at Wallaceburg, Ont., a new system is in use.

One function of this control system is an improvement over the series of lights or bells or buzzers, which often are used for starting or stopping the flow of the product through a plant.

The central panel behind the line of filling machines "watches" peas from the time bucket elevators scoop them from receiving bins until they pass through the hoppers to the filling and packaging machines.

Start Pea Season

Peas are the first vegetable to move through the recently reorganized plant.

This plant, which was a war-time project of the H. J. Heinz Co., was purchased by Libby in 1956 and was remodeled last winter. It now represents a $2.5 million investment to the wholly-owned foreign subsidiary of Libby, McNeill & Libby, Inc.

One interesting point in the Libby layout is that the controls which set the pace for the entire line are relatively simple. Pumps, conveyors, washers, etc. at first were figured in the control system, later were eliminated.

The result is a three-step control system: incoming elevators, filler hoppers and closing machines. The system is designed primarily to eliminate the gluts and slack periods caused by mechanical trouble or poor supervision. This is a gain in efficiency. At the same time, by avoiding pile-ups in the processing line, the controls will keep more exact standards of quality.

This control system is assisted by conventional temperature controls for the blanchers – on the control board – and specific gravity controls for the quality graders – not on the board. Communication through the plant is aided by an implant telephone system.

1. The speed of the bucket elevators bringing peas to the cleaner can be regulated. When the man at the control panel finds a filler hopper is full, and a closing machine stopped, he can slow down the bucket conveyors. Stop- and start-controls also are on the board.

The operating mechanism includes a loading panel connected pneumatically with a variable drive on the elevator motor. The air pressure can be adjusted on the panel board within the standard 3-to-15 lb. range. This changes the speed of the buckets from 33 to 120 per minute.

Washers, conveyors, pumps, water flumes continue at a set operating speed despite variations in incoming amounts of peas.

2. The Libby plant has three tubular blanchers moved to Wallaceburg from the pea operation at the Chatham, Ont. plant, and two new horizontal blanchers.

The speed of the peas through the blanchers is still set at the machine. However, the temperature is regulated by panel board control. A transmitter unit is connected with a temperature measuring device at the discharge end of the blancher. The controller on the panel board which accepts the signal is "T" connected to the receiver. The receiver in turn transmits a signal indicating the proper temperature. The controller keeps the two signals together by regulating the steam input.

Another recorder—no control mechanism – is connected with the intake end of the blancher to provide zone control.

Panel for Quality Graders

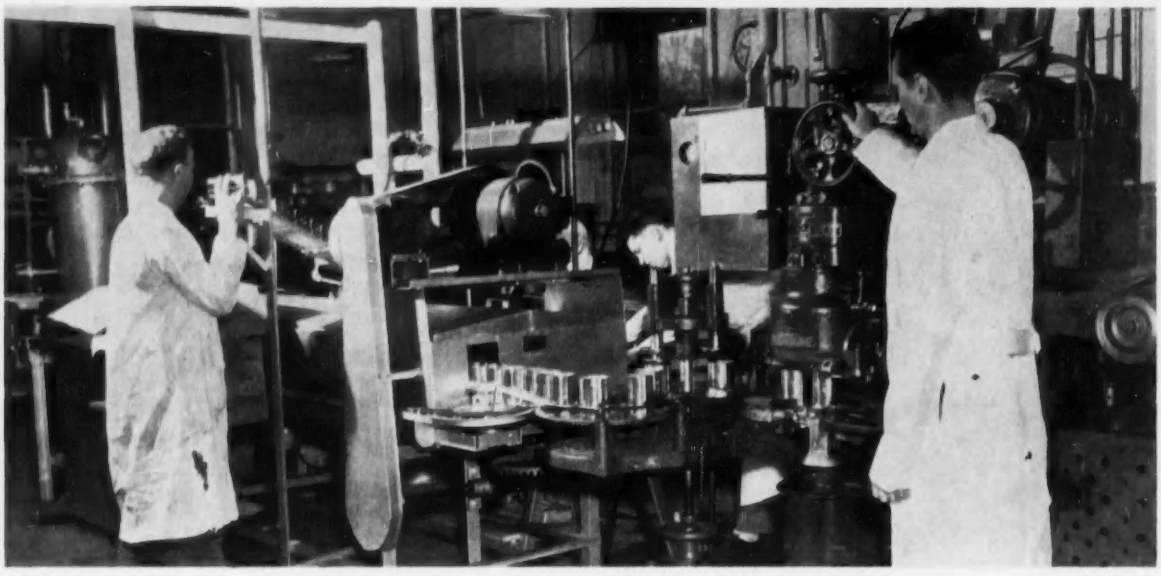
From the blancher, the peas are pumped to an upper floor to the battery of quality graders. The specific gravity of the brine is regulated by control valves on the intake pipe from the brine-making tank. These controls could be transferred to the central panel. However, they are more convenient in their present location for the supervisor on the upper floor.

3. Peas are flumed to inspection tables and then into channels to the filling machines. The supervisor on the upper floor has a monitoring panel that is wired in parallel with the central panel. The level of peas in filler hoppers registers on both panels. The closing machines (or in the case of the two freezing lines, the

(Continued on Page 43)

WILBUR A. GOULD, PH.D.
Ohio State University
Quality Control Editor

Quality Control Clinic



Variable speed exhaust is equipped for use also as spray cooler for high temperature short time pasteurized canned tomato juice.

Pilot Plant Operations Eliminate Quality Errors

Pilot plant is used effectively on quality problems as well as production

There is great value in a well-designed and operated pilot plant. In this small scale factory, one or more variables may be accurately controlled for the guidance of production line operations. Processing characteristics or quality attributes may be studied and evaluated under closely controlled conditions.

A pilot plant should be designed for batch or continuous processing of small quantities. Standard food-processing equipment may be used for this purpose, although "scaled-down" models of certain machines are often available. The pilot plant design must be flexible in machinery and controls, for methods of processing, and for the material in process.

Careful planning must go into each unit from the standpoint of construction, materials and design, placement and use of controllers and recorders, and methods of collecting data and the possible effect on the resulting information. The pilot plant should be a research tool to benefit the quality control, production, and sales divisions. It definitely should not be the property of any one of the above divisions alone.

Some of the many advantages of a pilot plant are:

1. Small quantities of a product may be studied effectively.
2. Subjective errors are eliminated.
3. Specific techniques or a new process may be developed.
4. Single or multiple variables may be studied.
5. Employees may be trained or demonstrations given with this equipment.

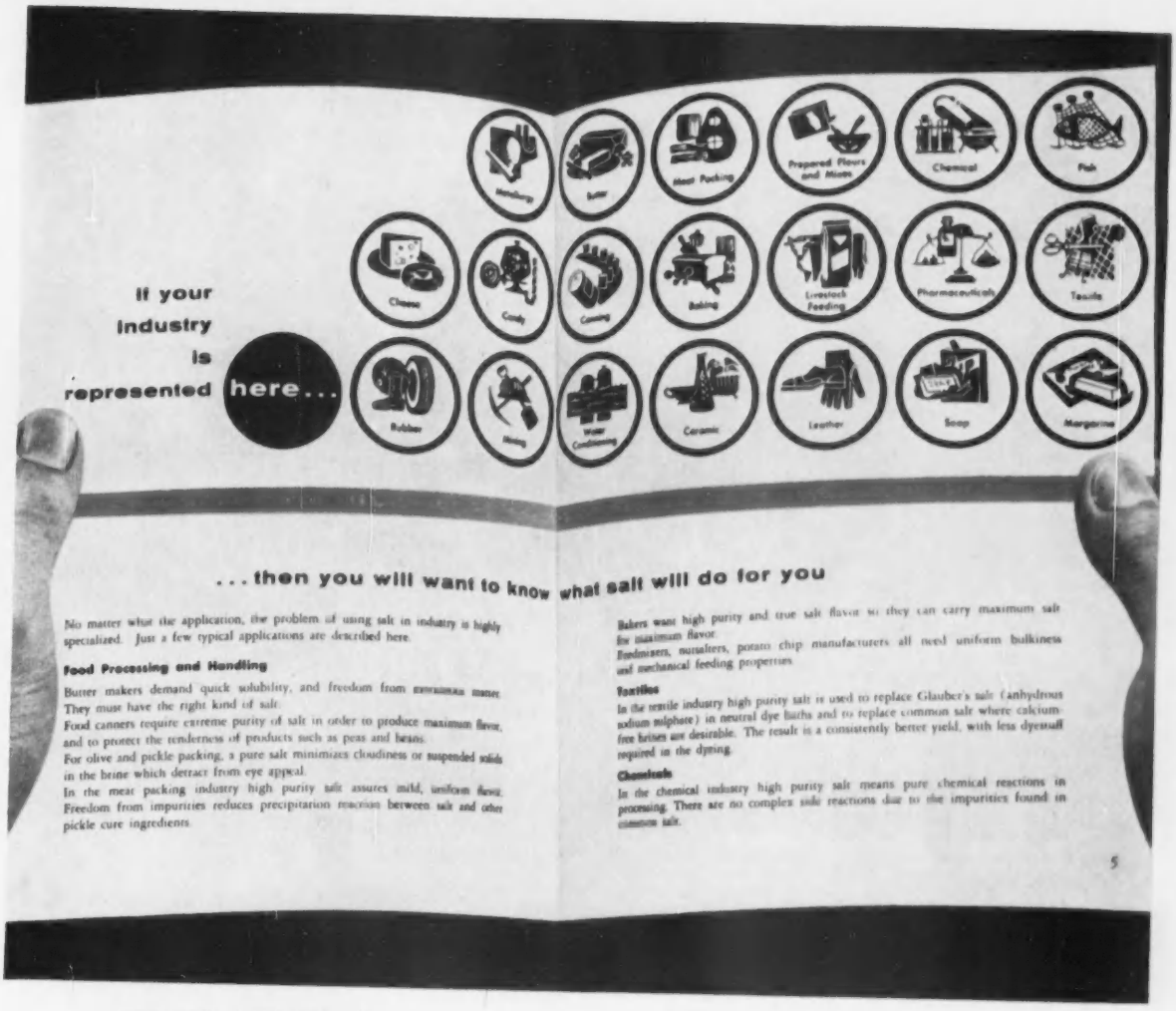
Two disadvantages encountered are: 1. Only comparative data can be obtained for yields and costs. 2. The pilot plant cannot be used economically as a production line operation.

A pilot plant may be used strictly for research on new product development or it may be used to determine the practicality of a new instrument or machine. Furthermore, it may be used in industry or at a university.

The pilot plant can also be used for various types of research. A few examples are: 1. Grade relationship studies (6, 7). 2. Evaluation of new varieties of fruits and vegetables (1, 4, 5). 3. Study of new quality control techniques, (2, 8). 4. Development of new products, which may involve procedures of manufacture, machinery, formulations, or process variables.

Trained Technologist

For successful operation of a pilot plant, there must be clearly defined


If your industry is represented here...
Cheese
Candy
Canning
Baking
Livestock Feeding
Pharmaceuticals
Textile
Rubber
Water Conditioning
Ceramic
Leather
Soap
Margarine
...then you will want to know what salt will do for you
No matter what the application, the problem of using salt in industry is highly specialized. Just a few typical applications are described here.
Food Processing and Handling
Butter makers demand quick solubility, and freedom from
They must have the right kind of salt.
Food canners require extreme purity of salt in order to produce maximum flavor, and to protect the tenderness of products such as peas and beans.
For olive and pickle packing, a pure salt minimizes cloudiness or suspended solids in the brine which detract from eye appeal.
In the meat packing industry high purity salt assures mild, uniform flavor. Freedom from impurities reduces precipitation reaction between salt and other pickle cure ingredients.
Bakers want high purity and true salt flavor so they can carry maximum salt for maximum flavor.
Fondmakers, nutsalters, potato chip manufacturers all need uniform bulkiness and mechanical feeding properties.
Textiles
In the textile industry high purity salt is used to replace Glauber's salt (anhydrous sodium sulphate) in neutral dye baths and to replace common salt where calcium-free brines are desirable. The result is a consistently better yield, with less dyestuff required in the dyeing.
Chemicals
In the chemical industry high purity salt means pure chemical reactions in processing. There are no complex side reactions due to the impurities found in common salt.
5

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objectives for each study. Also, there should be a competent operator to insure the uniformity of each operation.

Obviously, this also implies the selection of a well-trained technologist to coordinate and direct such a program. The director of the pilot plant must understand each unit operation individually and in combination, as well as the explicit details of conducting a research program. The best pilot plant is no assurance of a successful program without the direction of a trained technologist in this area of work.

A pilot plant can be a big asset to the quality control department for studying the effects of machines, materials and methods on the quality of the finished product. It can be used to set up standards of efficiency or performance of each unit operation. It can be used to set quality control limits. Furthermore, it can be used to establish and test new processes which might lead to higher quality in the finished product. The old axiom "Make your blunders on a small scale and your profits on a large scale" is most fitting.

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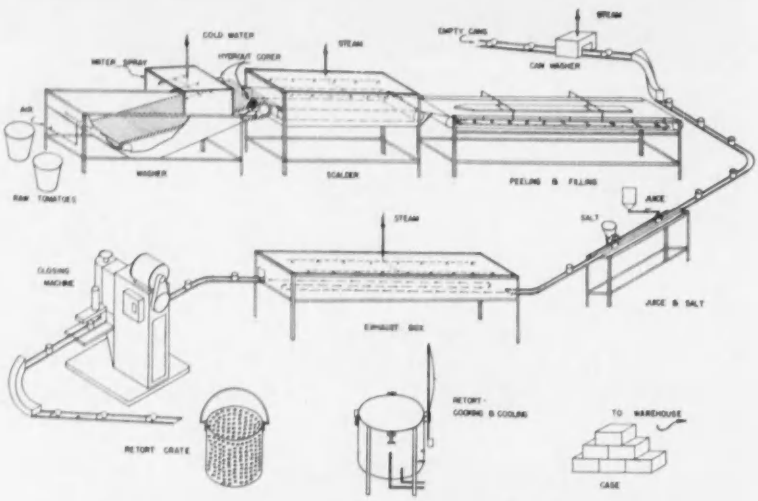

Arrangement of equipment for canning in Ohio State University pilot plant.

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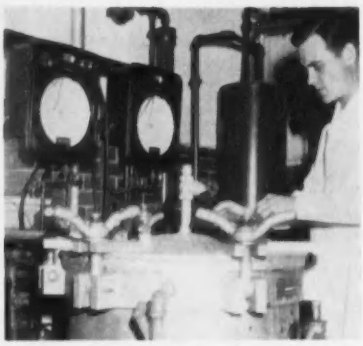
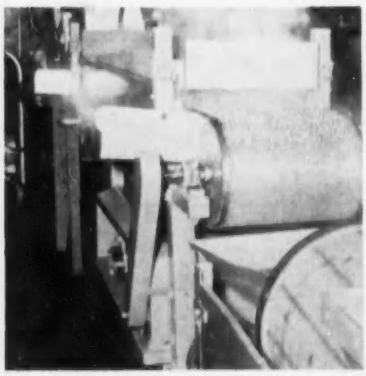
Equipment in Ohio State University pilot operation.

Corn Husker, No. 2 Retort .....Food Machinery and Chemical Corp.
Pasteurizer .....Walker-Wallace Co.
Agtron Fx.....Magnuson Engineers
Controllers, Recorders..Foxboro Instrument Co.
Closing Machine.....American Can Co.
Tomato High Pressure Washer, Tomato Scalder, Vegetable Blancher, Vegetable Rotary Washer.....Scott Viner Co.
Exhaust Box.....A. K. Robins Co.

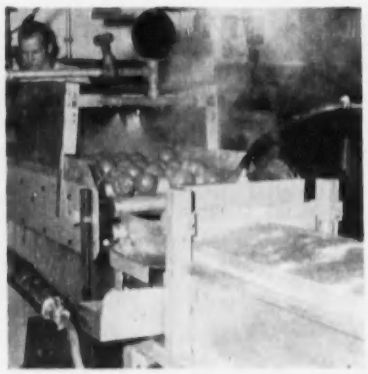


Retort controls operate for full cycle.

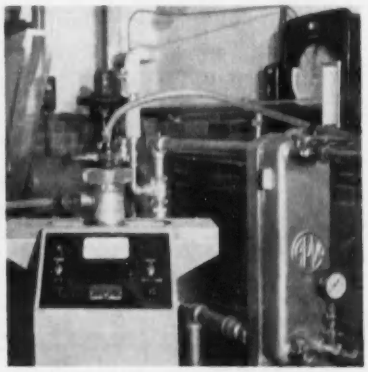
Sweet corn is husked automatically.



Peas are blanched in variable speed blancher, cooled in rotary washer.



Soak tank, spray washer and variable speed scalder are used for tomatoes.



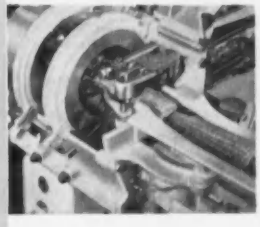
Continuous colorimeter controls color of tomato juice with HTST pasteurizer.

MORE CORN OFF THE COB
Faster, Cleaner
—Unmatched for Yield

Morgan Packing Company, Inc., with 48 FMC Model 3-A Cutters in three plants, shows impressive production gains on cream style corn.

The New FMC Model 3-A Corn Cutter

- ✓ Up to 7% more yield per ear!
- ✓ Up to 20% more output per cutter!
- ✓ No grading—handles mixed ear sizes!
- ✓ Less maintenance—21% fewer parts!
- ✓ Up to 50% more cutting between honings!



Automatic pre-opening of knives assures proper cut, deep or shallow, according to ear size. Gauging fingers and knife settings are adjusted instantly while cutter is in operation.

Many leading plants put thousands of production hours on hundreds of new Model 3-A Corn Cutters last season. Conservative customer estimates of increase in yield range up to 7%—depending on make and model of corn cutters replaced. In case after case, yield and quality are reported as greatly improved—even where operations average 120 or more ears per minute! Featuring A.S.D. —"Automatic Size Detection," the all-new Model 3-A utilizes a system of pre-opening knives which cut mixed ear sizes to any desired depth—without size grading or constant machine adjustment. Get the full story from your FMC representative, or write for descriptive bulletin No. 601-E today. You'll want information on the FMC easy-to-use Knife Honer, too.

fmc

FOOD MACHINERY AND CHEMICAL CORPORATION

Canning Machinery Division

General Sales Offices:
WESTERN: SAN JOSE, CALIF. • EASTERN: HOOPESTON, ILL.

MEMBER

19th Annual Forum
Oct. 28, 29, 30, 1957
Hotel Statler
New York City

Keep up with container developments! Watch Canco's TV show, NBC NEWS, on alternate Mondays.

This oval symbolizes progress!

Canco's famous oval trade-mark has identified thousands of important canning "firsts." ☆ In the canning of tomatoes, for instance, American Can Company developed the equipment that made the steam-flow closure procedure commercially successful. This method eliminates the exhaust box and allows more efficient use of cannery space. ☆ Advances such as this are the result of Canco's continuing research and development program—a program which helps canners produce better and better products.

AMERICAN CAN COMPANY

New York • Chicago • San Francisco

COME TO CANCO FIRST!

Pallet system of handling permits fast unloading, little waiting at dock.

Collecting belt delivers to pitters.

Flexible Intake Speeds Cherry Pack

Loads can be shifted from plant to plant as peak of season moves North

A three-plant system has advantages over a single plant in handling a heavy harvest. This is particularly true of the system of the Michigan Fruit Canners, Inc., with three plants spaced 22 miles apart along the eastern shore of Lake Michigan. The distance is far enough to stagger the peak load as the season moves north and still close enough to transfer shipment easily from plant to plant.

The 1957 crop of cherries in Southwest Michigan is turning out to be heavier than any since 1950. Processors estimate it is twice as big as that of 1956.

Inside the three Michigan Fruit Canners plants the operations are diversified. The Benton Harbor plant, southernmost of the three, has four lines working from a battery of 20 pitters. Cherries are canned in consumer and institutional sizes and are frozen in 30 lb. tins. The cherry pie filling, one of the big items in the pie-filling line, is canned in consumer sizes.

Freezing at Fennville

The next plant north at South Haven handles only institutional and consumer size cans of the hot pack cherries. The plant at Fennville, Mich. both freezes and cans cherries.

The big harvest has not jammed up the plants. The supply of cherries has stayed reasonably close to the total capacity of the three plants. This capacity is enormous. In the three plants 52 pitters are used. Averaging around one ton an hour per pitter, this would put the total capacity at around 1,000 tons a day. The freezing volume has been increased this season, but no more than the volume of the hot packs.

Physical Handling

In the past, according to A. E. Brown, vice president-treasurer of Michigan Fruit Canners, Inc. and general manager of the Benton Harbor and South Haven plants, the peak of the cherry season was marked by a hurried confusion in the plants. Over the years, however, the addition of mechanical equipment has changed this.

Mainly responsible, of course, are the lift trucks, the continuous cookers and the pallet-unloading systems. None of these things are strikingly new, but at the Michigan Fruit Canners plants they are handled extremely well.

This year the big crop has moved smoothly, with little fuss. Problems, of course, came with the drop in grower prices due to the big harvest. And there may be more problems before the warehouses have been emptied. But in the physical handling the fast unloading combined with high plant capacities permits a smooth, ordered pack.

Cherries from south Michigan are handled in the Benton Harbor plant. The season moves north to include South Haven and then Fennville. By that time Benton Harbor is past the peak and is able to take part of the Fennville cherries. Ordinarily on a heavy year the Fennville plant would be overloaded. Once Fennville is past its peak, Benton Harbor reaches as far north as Frankfort – six hours by truck – to buy cherries.

Around 20 receiving stations receive, weigh, grade and reload cherries for shipment. Normally, each station ships to one of the three plants. However, when shipments must be diverted from one plant to another, the routing is changed at the receiving station.

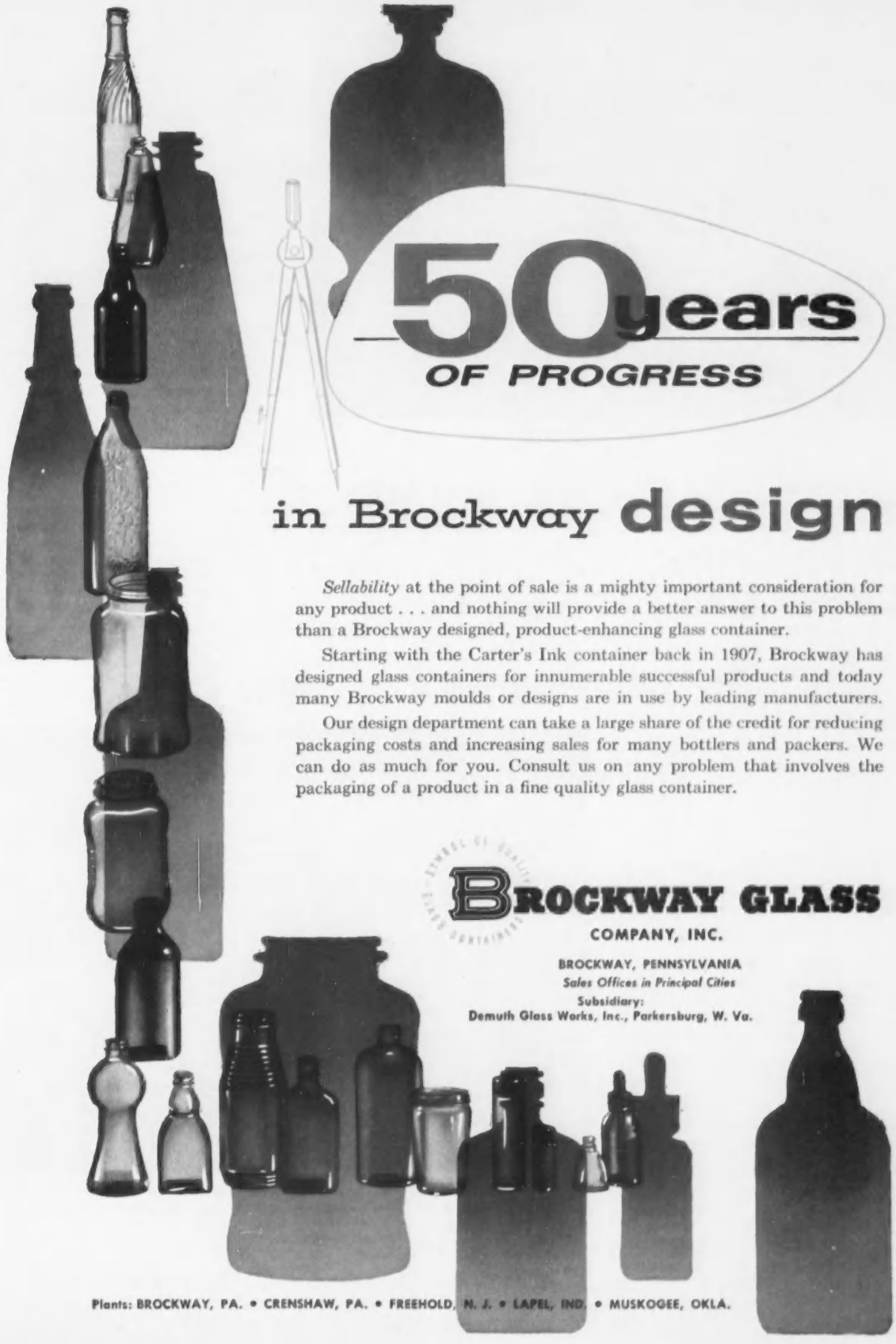
To an outsider two things appear outstanding about the Michigan Fruit Canners operation. The emphasis on quality is real and energetic. And the diversification of products among the three plants squeezes as much time out of the production facilities as possible.

Quality Methods

The one ticklish product during the cherry season is the pie filling. The formula for the syrup has proven to be successful. But during the manufacture of the filling, extremely close control must be kept. This means accurate filling methods, close temperature controls on the exhaust, and agitating during the cook.

Mechanically, the Michigan Fruit Operation has kept up-to-date. But more important is the laboratory set-up. F. J. Erickson, who acts as quality control specialist for the three plants, is a graduate chemist, M.S., Michi-

(*Continued on Page 37*)



50 years OF PROGRESS

in Brockway design

Sellability at the point of sale is a mighty important consideration for any product . . . and nothing will provide a better answer to this problem than a Brockway designed, product-enhancing glass container.

Starting with the Carter's Ink container back in 1907, Brockway has designed glass containers for innumerable successful products and today many Brockway moulds or designs are in use by leading manufacturers.

Our design department can take a large share of the credit for reducing packaging costs and increasing sales for many bottlers and packers. We can do as much for you. Consult us on any problem that involves the packaging of a product in a fine quality glass container.

BROCKWAY GLASS
COMPANY, INC.

BROCKWAY, PENNSYLVANIA
Sales Offices in Principal Cities
Subsidiary:
Demuth Glass Works, Inc., Parkersburg, W. Va.

Plants: BROCKWAY, PA. • CRENSHAW, PA. • FREEHOLD, N. J. • LAPEL, IND. • MUSKOGEE, OKLA.

Regular No. 303 can is obviously smaller than the 1-lb. 5-oz. tall can.

New Tall Can Emphasizes Larger Size

A No. 2 can on the shelf looks too much like a No. 303 can to expect much response from the customer, according to R. L. Hutchinson of Michigan Fruit Canners, Inc. But if the customer recognizes this difference, he responds to the bigger can.

This problem of how to tell the customer how big a No. 2 can is finally influenced the introduction of the No. 303 tall can. The No. 303 tall can holds 2 oz. more than a No. 2 can and about 1/3 more than the standard No. 303 can. On a shelf, displayed beside a No. 303 can, the difference in the tall can is readily apparent.

The customer preference for a larger can of water-pack sour cherries was demonstrated first by the U. S. Department of Agriculture. The two can sizes, No. 303 and No. 2, were displayed side-by-side on the shelves of a Kroger store in Pittsburgh, Pa. The difference in price and size was clearly marked—something that in ordinary handling would not be possible. The larger can outsold the smaller by a ratio of 5 to 4.

With this encouragement, the Michigan Fruit Canners introduced its No. 303 tall can on a test basis in several markets last winter.

The stores handling the new sizes were asked not to give special emphasis to the product, but to give equal space with the conventional No. 303 can. One of the stores, the American Stores of Philadelphia, stocked all three sizes and priced them: No. 303, 23c; No. 2, 25c; and No. 303 tall, 27c. The preference among customers after two weeks was 22%, 30% and 48% respectively.

In one store, Mr. Hutchinson said, the 21 oz. can was given a sharp markup. The prices were 22c for the No. 303 and 32½c for the tall can. Even so, 109 tall cans were sold to 123 of the No. 303's.

This year, more tall cans will be used in more markets, although as far as Michigan Fruit Canners is concerned, the item is still experimental.

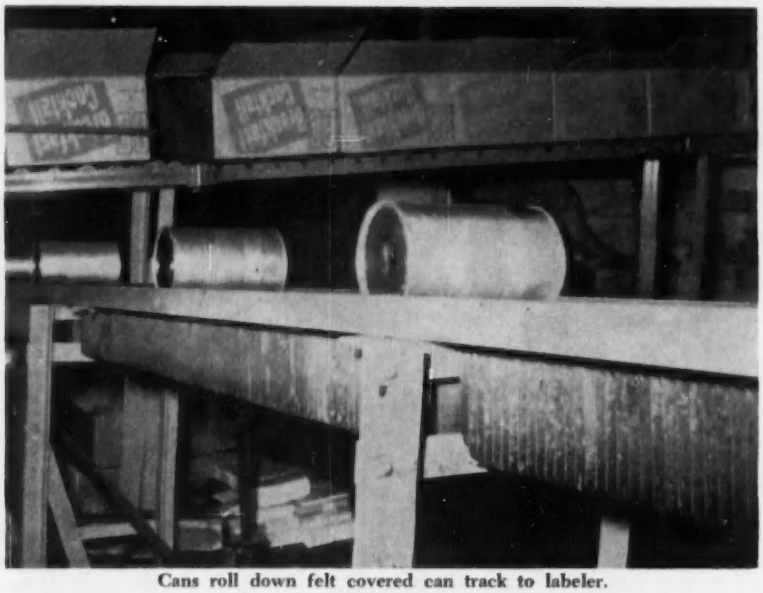
Vegetable Report Shows Lower Acreages

Pea production will be down 5%, snap beans up 7%, winter and spring spinach about the same as last year. These are the estimates by the U. S. Department of Agriculture for the three early processing crops.

Estimates were also made on planted acreage. Some of these included changes from earlier estimates:

	Estimate	1956
Green lima beans	96,750	—11%
Beets	19,920	—10
Cabbage for Kraut (Contract)	7,820	—24
Sweet corn	455,020	—4
Cucumbers for pickles	139,030	10
Tomatoes	305,100	—14

Heated Conveyor Dries Cans



Cans roll down felt covered can track to labeler.

Sloppy labeling was the result of can labels not sticking at the D. E. Winebrenner Co. plant at Hanover, Pa. Investigation revealed it was the result of the cans being wet when they reached the labeler. So the company's engineers installed heating units under the conveyor leading to the labeling machine and placed a bed of felt on top of it.

Now the heat and the blotting characteristics of the felt combine to combine to deliver the cans absolutely dry—and the labels stick neatly.

Using Salt Efficiently

by **INTERNATIONAL SALT COMPANY, INC.**—America's largest producer of salt

"Wet Storage"—an Economical Way to Store Rock Salt

A problem frequently encountered by salt-using companies is how to make the best use of available tank space for rock-salt storage. There are three basic ways to store salt in tanks: in brine form, in dry form, and in "wetted" form (dry salt stored under covering brine). Each method has certain advantages.

Salt stored in the form of fully saturated brine offers the important advantage of convenience: the brine can be pumped to points of use in the plant, eliminating salt-handling expense. However, the amount of salt which can be stored in this way is relatively small, because each cubic foot of brine contains only about 19¾ lbs. of salt in dissolved form.

Salt stored in dry form makes far better use of available tank space: each cubic foot contains an average of 72 lbs. of rock salt—about 3.6 times the amount which can be stored as brine. However, moving dry salt to points of use is time-consuming, inconvenient, and expensive. And dry-salt measurement is not as exact, or as easy, as measurement of fully saturated brine.

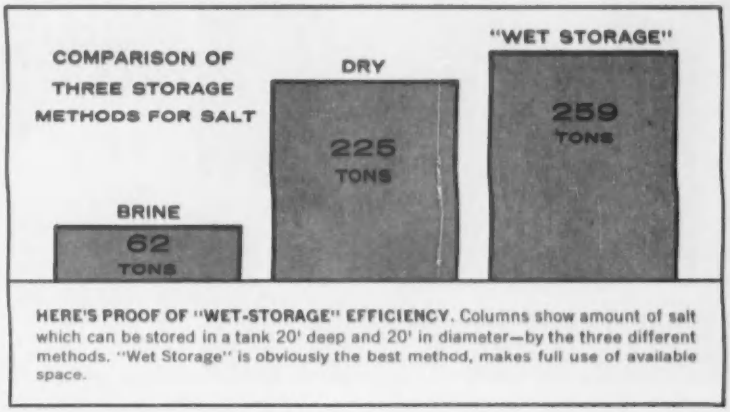
To get the benefits of fully saturated brine, along with the space-saving storage of dry salt, many salt-using companies are now using the tank-storage method known as "Wet Storage." This method—which actually combines features of dry storage and brine storage—offers these advantages:

1. Any given tank can store *more* salt than is possible when either dry salt or saturated brine is stored by itself.

2. There is a constantly available supply of fully saturated brine for every plant need.

3. Much less handling of rock salt is required. There are fewer salt deliveries, fewer brine-making problems.

How "Wet Storage" works. When a tank is filled with dry rock salt, almost half the storage space is actually "empty," because the salt crystals do not pack solidly together. But when the voids between the crystals are occupied by fully saturated brine, additional amounts of salt can be stored. This is because fully saturated brine itself contains 2.65 lbs. of salt per gallon. Thus, with salt stored both "wet" and in brine form in the *same* tank, maximum space is used for salt storage.



HERE'S PROOF OF "WET-STORAGE" EFFICIENCY. Columns show amount of salt which can be stored in a tank 20' deep and 20' in diameter—by the three different methods. "Wet Storage" is obviously the best method, makes full use of available space.

For example: in a circular tank 20 ft. in diameter, and 20 ft. in storage depth, the following amounts of salt can be stored, using the system of wet storage:

In "wetted" form the tank will hold about 231 tons of rock salt. In addition, there will be about 28 tons of salt dissolved in the covering brine. Total salt contents of the tank: 259 tons. Compare this with the other two salt-storage methods: The same tank will hold only 62 tons of salt dissolved in brine and about 225 tons in dry form.

Lixator best example of "Wet Storage" principle. Storing salt under covering brine is the basic operating principle of International's exclusive Lixate Brine-Making Process. In the Lixator, dry rock salt and fully saturated brine are combined, making fullest use of available storage space—and, at the same time, providing pure, crystal-clear brine for immediate use when and where it's needed.

In the Lixator (which is filled with rock salt), water is admitted at the top. This water dissolves some of the rock salt, to make fully saturated brine. This brine then fills the voids between the remaining salt crystals. As brine is drawn off, it is completely filtered by the salt crystals in the bottom portion of the Lixator. More rock salt is then automatically fed into the Lixator from the storage supply, and more brine is made to occupy the empty spaces.

Today, International offers many types of Lixators—all based on the principle of "Wet Storage." There are Storage Lixators, Silo Lixators, Sterling Model Lixators—in numerous designs to suit any plant layout.

TECHNICAL SERVICE WITH YOUR SALT

Through skilled and experienced "Salt Specialists," International can help you get greater efficiency and economy from the salt you use. International produces both Sterling Evaporated and Sterling Rock Salt in all types and sizes. And we also make automatic dissolvers in metal or plastic for both kinds of salt. So we can recommend the type and size of salt most perfectly suited to your needs.

If you'd like the assistance of an International "Salt Specialist" on any problem concerning salt or brine—or further information on "Wet Storage"—just contact your nearest International sales office.

International Salt Co., Scranton, Pa.

Sales Offices: Atlanta, Ga.; Chicago, Ill.; New Orleans, La.; Baltimore, Md.; Boston, Mass.; Detroit, Mich.; St. Louis, Mo.; Newark, N. J.; Buffalo, N. Y.; New York, N. Y.; Cincinnati, O.; Cleveland, O.; Philadelphia, Pa.; Pittsburgh, Pa.; and Richmond, Va.

FOR INDUSTRY, FARM, AND THE HOME—
STERLING SALT
PRODUCT OF INTERNATIONAL SALT CO., INC.

Indicator before and after change. Red color on right shows predetermined time-temperature level has been exceeded.

Field Testing Program Starts on New Thaw Indicator

Indicator will check storage and transportation temperatures

One big problem of the frozen food industry – how to keep food frozen from the freezing room to the customer – will be more easily isolated with a new device now undergoing final testing.

This is an indicator, developed by the Aseptic-Thermo Indicator Co. It is intended to be used in frozen food packing cases, to check on temperatures from the time the food is packed until it is unpacked at the retail outlet. If temperatures rise above a desired point the indicator turns from yellow to red.

Time-Temperature Integrals of Indicator

	Color Change Start	Color Change Complete
10°	1200 min	6500 min
20°	30 min	250 min
30°	7 min	11 min
40°	4 min	8 min

The indicator can be used only once. It does not respond to high temperatures until it has first been subject to low temperatures of a freezing room. The indicator can be shipped and handled in storage until used with few precautions. It should be kept between 40° and 60° until activated.

According to the manufacturer the type of activator can be fitted to the type of product being checked. Foods which should be stored at -10° will use a different indicator, predetermined for storage temperature.

Field Tests Start

Now that the indicator has been developed and has met laboratory tests, it will be tested in the field by food processors before it is put on the market.

More detailed recommendations may be made on how the indicator is placed in the shipping carton. At the present time the recommendations call for placement inside the carton against the inner wall. This position would roughly correspond with the temperature of the outside of the food packages nearest the carton wall.

The variance in temperatures within the carton and the type of indicator needed for a particular food product, the methods of placing indicators in the carton and how and when to check them will require recommendations from food processors.

A single indicator without periodic checks can give only two pieces of information. Either the temperature has been above a certain time-temperature integral, or it has not. If the time-temperature integral is on the borderline of saleable and unsaleable food, the indicator will show whether the food is still good. But it will not show how far deterioration may have progressed.

Degree Not Shown

Similarly, a single indicator, predetermined to change at a time-temperature integral of a satisfactory level, would only tell whether or not that particular temperature had been maintained.

Use of indicators will bring methods of modifying this basic limitation. Periodic checks of indicators will help. Also, the use of two or more indicators within a single carton may give information. Research information from the time-temperature studies on the deterioration of frozen foods will help determine the relationship between package temperatures and storage condition.

The indicator, called "Freez-Chex," is the basis for a valuable, practical thawing indicator.

William Huyck, president of Aseptic-Thermo Indicator Co. told *Food Packer* that any companies having an interest in testing this indicator would be sent laboratory samples on request. The testing companies would be urged to report fully the results of their tests and submit constructive criticism. Requests should be sent to ATI, 11470 Vanownen St., North Hollywood, Calif.

Do Modern Plants Both Can and Freeze?

– At Wallaceburg, Ontario, a vegetable plant carries on combined operation. **– See page 20.**

– At Benton Harbor and Fennville, Mich. one of the biggest cherry packers, during one of the biggest harvests, carries on a combined operation. **– See page 28.**

Freezing News

Promotion • Selling • Research

Beef Patties

Colonial Stores, with headquarters in Atlanta, Ga., has a new design – a chef with traditional cap – for its Pride frozen beef patties.

The overwrap is of foil and gravure process printed in five colors for high sales appeal and product protection.

An electric blue transparent ink provides a background for the brand name, Chef's Pride, in yellow on the upper section of the wrapper. On the lower section, the blue is a background for a yellow plate. Center of the wrap is opaque white with product name in red and information in blue.

The product is available in two sizes – the smaller containing eight and the large, 16 patties. For consumer re-storing convenience once the package is opened, the patties are cello-wrapped in units of four.

Orange Concentrate

A new orange concentrate, said to be the closest to fresh-squeezed juice in taste and aroma yet achieved in concentrates, has been introduced by Topco Associates, Inc., Chicago, supplier of private label grocery and frozen food products.

Packaged in 6-oz. cans and marketed under the new Dining-In label, the concentrate is processed for Topco by Pasco Packing Co., Dade City, Fla.

Spokesmen for the two companies said that the qualities of fresh-squeezed juice are achieved through rigid field selectivity and quality control enforced throughout processing.

In order to achieve maximum freshness, oranges are given delivery priority to the processing plant and not more than 36 hours lapse between picking and processing.

Courtesy Milprint, Inc.

Fresh Frozen Meats

A line of fresh frozen meats has been introduced to metropolitan New York area delicatessens by Nagel, Inc., Brooklyn, N. Y.

The line includes center-cut pork chops, sirloin strip steaks, cube steaks, hamburger patties and wafer-type veal steaks packed in a simple film inner wrap and then inserted into highly bleached and heavily waxed cartons with twin locks.

The cartons are designed to make effective use of large white areas to set off an appetite-appealing illustration of the product.

Courtesy Hinde & Dauch

Corrugated Meat Container

The Stanny-Morris-Livingston Co., Detroit, Mich., has recently adopted a new corrugated box for the shipment of its Cherokee brand of quick-frozen meats.

The 2-piece shipper holds 10 to 15 lbs. of hotel-pack meat. Both body and cover sections are paraffin-coated for added product protection.

The meat is cut and packaged in the box before it is frozen. Once frozen, the steaks and chops are delivered to the customer in the company's trucks.

Exterior of the carton is white, printed in red and green. In addition to its eye appeal, the new shipper helps seal in meat flavors, speeds up packing operations and establishes a quality "atmosphere" for a premium product, the packer said.

Lift-Up Lid

Mott Haven frozen pure pork sausage is being packaged in a new aluminum foil cook-in tray closed with a lift-up lid.

The full-color lithographed lid features a vignette of the sausage accented by the canal scene that is Mott Haven's trademark. Under the trademark on the lift-up lid is a film window which permits inspection of the product.

Courtesy Western Waxide Specialty Packaging Div., Crown Zellerbach Corp.

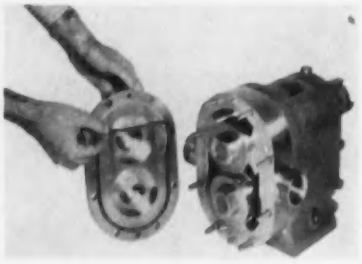
Calves Liver

A newly designed package of calves liver has been introduced by Excelsior Quick Frosted Meat Products, Inc., Long Island City, N. Y.

The product is packed in three equal portioned slices, already skinned and deveined. Background color is pastel purple and the vignette features a full-color serving suggestion.

What's New?

Supplies • Equipment • Trade Literature



Pump Head Gaskets

A reusable rubber pump head gasket which is said to reduce maintenance costs and cleaning time on Waukesha Positive Displacement pumps, is available from Waukesha Foundry Co., Dept. F, Waukesha, Wis.

The "O-Ring" – or "Oval-Ring" – is designed to fit into a specially machined groove in the pump head. This eliminates the need for paper gaskets often used in this type of pump, and which usually must be discarded each time the pump is dismantled for cleaning.

The gasket is said also to provide more positive and complete vacuum and pressure seal without excessive tightening of the pump head.

It is available for all pump sizes, from 1500 to 50,000 lbs. per hr. capacities, in materials capable of withstanding normal to high temperatures and corrosive liquids.

Compatible Resin Glue

A new resin emulsion glue has been developed by Paisley Products Inc., Dept. F, 1770 S. Canalport Ave., Chicago 16, Ill., which is completely compatible with dextrine adhesives.

Glues can be interchanged in a packaging machine without shutting down to clean the glue box. When cases need a firmer bond than ordinary simple container sealing runs, the new resin formulation, E 2131, is poured into the machine.

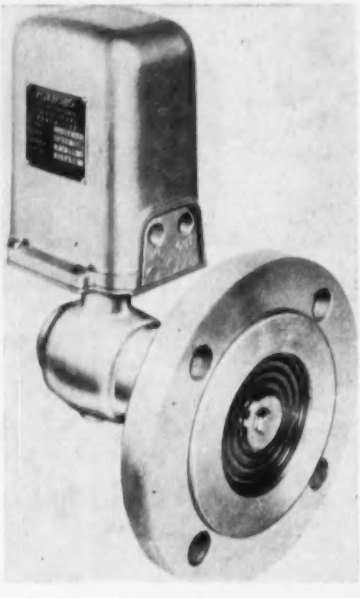
The E2131 is white, 2100 cps in viscosity, non-foaming, non-stringing, won't build up and has the same speed and strength characteristics expected of any other modern polyvinyl acetate base product.

It can be interchanged with any borated alkaline dextrine adhesive.

Transparent Containers

A plastic container that will withstand quick freezing temperatures and is safe to use at high cooking temperatures now can be formed cheaply and rapidly.

The Auto-Vac Co., Dept. F, Bridgeport, Conn., has developed a new machine, the Pressure-Vac, which forms the plastic Mylar into strong, light and fully transparent containers. According to the manufacturer, one processor is already conducting tests with a view to early marketing.



Liquid Level Transmitter

The Type FA d/p Cell Transmitter, a differential pressure liquid level transmitter, mounts directly on a tank nozzle to provide a simple method for measuring viscous or slurry-type liquids in open or closed vessels. Operating on the force balance principle, it maintains calibrated accuracy over a wide range of ambient conditions.

The level measuring element – a silicone-filled diaphragm – is assembled in a 3-in. flange for flush mounting on the side of a vessel. Head of liquid in the vessel applies force to the high pressure side of the capsule which is opposed by force on the low pressure side. The low pressure side may be open to atmosphere for measurement of open tank level, or it may be connected by piping to the top of a closed tank to balance out static pressure.

The pneumatic output of the transmitter – a 3-15 psi signal proportional to tank level – will operate a remote indicator, recorder or controller. No auxiliary amplifier is needed.

The transmitter is manufactured by The Foxboro Co., Foxboro, Mass.

Steam Gun Detergent

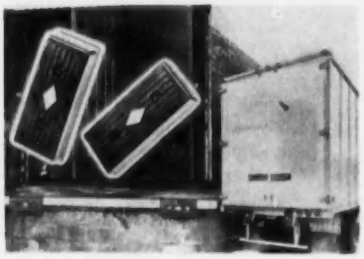
Oakite LSD is a new liquid detergent designed for use in steam guns and self generating steam cleaning equipment. It is manufactured by Oakite Products, Inc., 144 Rector St., New York 6, N.Y. The new detergent was developed to simplify the preparation of steam cleaning solutions. It reduces the clogging of coils in self-generating equipment. It is said to provide effective soil removal at concentrations of 1 to 2 oz. per gallon of water delivered by the gun.

Its solutions have a pH of 12 in the operating range. Reports from users indicate that it produces no offensive fumes. When used as recommended it is claimed to be safe on steel, brass and magnesium.

Box Car Compartments

Box cars with three compartments of flexible sizes are now in use by 17 carriers. The Pullman-Standard Car Manufacturing Co., Dept. F, 221 N. LaSalle St., Chicago, manufacturer of the new type car, claims that the compartments allow efficient, low-cost loading and provide complete security even for heavy-loaded shipments.

The compartments are made by two pairs of permanently installed gates. The gates can be shifted against the face of a load and locked. According to the manufacturer, commodities such as canned goods can be safely heavy-loaded in shipments of up to approximately 90,000 lbs.



Bumper Block

A new type of rubber bumper block, called the "Cushioneer" is being marketed by The Castle Rubber Co., Dept. F, P.O. Box 589, East Butler, Pa.

It is designed primarily for the protection of such materials handling facilities and equipment as loading and receiving docks and truck frames.

The Cushioneer is available in two styles: bonded to a steel plate for welding attachment; or unbonded for bolt attachment. Several standard sizes are available.

NINTH ADVERTISEMENT OF A SERIES *"THE HISTORY OF GLASS CONTAINERS"*

1812

The British naval blockade of Chesapeake and Delaware Bays, during the War of 1812, seriously affected the glass bottle industry in the North by cutting off shipments of Virginia coal and other manufacturing essentials. Unable to meet the heavy cost of overland freight, manufacturers soon devised techniques that led to a more economical use of raw materials . . . and through experimentation, to a finer product.

Modern research at Metro has regularly provided the glass industry with improved and more efficient production methods . . . a part of METROmatic service . . . the service that assures packers a quality product, delivered on an unfailing schedule, geared to specific production requirements.

METRO GLASS COMPANY, INC.

MANUFACTURERS OF QUALITY GLASS CONTAINERS

WASHINGTON, PA JERSEY CITY, NEW JERSEY CHICAGO, ILL.

Picking Boxes

"How to Move Mountains . . . of fruit and produce in standard sawn-nailed picking boxes" is the title of an informative booklet available from American Box Corp., Dept. F, 2740 Hyde St., San Francisco 19, Calif.

Subjects covered in the illustrated booklet include palletization, pay load deliveries to processing plant or packing house, storage, handling and automation.

Air Blower for Sugar

An unloading system for granulated sugar has been announced by the Albert Air Conveyor Corp., Dept. F, 1 Broadway, New York City. An air blower installed inside a truck trailer is able to blow sugar at the rate of 30 tons an hour into a storage tank. A six-inch pipe carries the sugar from the trailer to the tank. The first system, installed in the Louis Sherry Preserves, Inc. plant in New York City, moves the sugar from street level to the top of a six-story building.

'Turnkey' Plants

The E. W. Bliss Co., Dept. F, 50 Church St., New York 7, N. Y., has announced a new service directed toward canners. The announcement was made by Robert Potter, president of the company. In effect, Bliss offers to act as contracting engineer for plants designed to manufacture cans. The canner would only need to "turn the key" of the new operating unit.

This "turnkey" service would provide an initial study to determine costs, savings, machinery and labor requirements, and capacity. Mr. Potter said that if the canner decides to build, Bliss will handle all construction, install complete lines of Bliss equipment and related items, train men, and stand by to see that the operation goes smoothly.

Tenderizer and Flavors

The Dodge & Olcott, Inc. Laboratories, Dept. F, 180 Varick St., New York 14, N. Y., have announced a seasoned tenderizer for seafood processors.

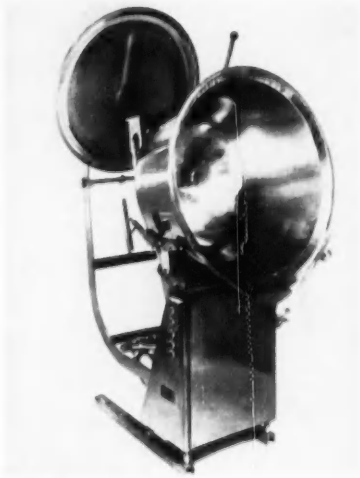
The product is for use prior to either quick freezing or cooking. It is a blend of spice essential oils and tenderizing solution with a small proportion of sodium benzoate added. Called Spisorama (Liquid) seasoned seafood tenderizer, the solution is ready for immediate use.

D&O also has developed three new spray dried citrus flavors – Dolcoseal Lemon Special No. 186, Orange Special No. 204 and Lime Special No. 205 – for use in gelatin desserts.

Speed Reducer

A shaft-mounted speed reducer is available for application where complex multiple reduction belt or chain drives have been required. The manufacturer, General Electric, Dept. F, Schenectady 5, N. Y., claims the new speed reducer offers flexibility of mounting arrangement, increased safety, and lower maintenance expense.

Ratio changes can be made in minutes simply by changing pulleys. The speed reducer is available in most ratings from ¼ to 40 horsepower at output speeds from 10 to 420 rpm. The unit is available in single and double reduction ratings, in ratios of 5- and 15-to-one.



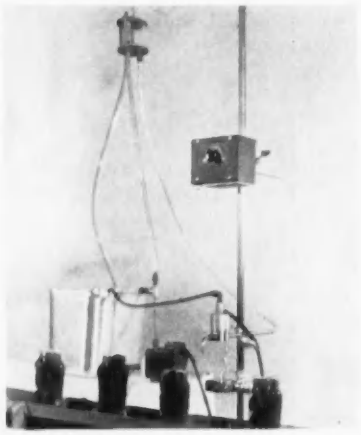
Tilting Kettles

A line of tilting kettles with special space saving and operating advantages has been imported from Sweden by the Lehara Corp., Dept. F, 60 E. 42nd St., New York, N.Y.

Constructed entirely of Swedish stainless steel and available in both round and rectangular models, the new kettles feature a tilting axle located at the front of the unit, eliminating side pillars to save floor space and permit use of common floor drain.

Hydraulic tilting action is powered by water main pressure and a 3-way valve stops the kettle in the desired position. The front suspended design also provides higher final pouring lip position for operator convenience, according to the firm.

The kettles are available in models to utilize steam from a central heating plant or with built-in steam generators heated by gas or by electricity. The hydraulically operated units are available in 10-150 gal. capacities; hand-operated models in 4-12 gal.



Liquid Dispenser

Kaufman Laboratories, Dept. F, 3034 Talisman Rd., Louisville 5, Ky., offers a system for dispensing small volumes of liquid automatically and accurately with the Kaufman Micro-Portioner.

The system is based on the principle that the volume of liquid which will flow through an orifice is proportional to the length of time it is allowed to flow. One drop to several c.c. can be dispensed at varying speeds up to 200 containers per minute according to volume dispensed.

A specially designed waterproof switch is placed in the line of travel of the bottles as they move along any type of conveyor. When the bottle energizes the switch, an electronic timer sends a variable preset impulse of constant duration to the solenoid valve, which opens its port, located in a preset position directly over the bottle. As soon as the required volume is delivered, the solenoid part automatically closes and is ready for the next cycle. The bottle never stops on the conveyor. Delivery is positive and drip-free.

Electrical requirements for the dispenser are 110 V, 60 cycles, A.C.; weight is 15 lbs.

Military Needs Listed For Four Canned Items

Tentative requirements were announced for canned peaches, cherries, apricots and peas by the Military Subsistence Supply Agency, 226 West Jackson Blvd., Chicago 6, Ill. The estimates were made, according to the Army announcement, "to aid industry in planning 1957 production."

Peaches, Choice, Type I or II; Style 1, 2 or 3: 12,428,500 lbs. in No. 10 cans and 2,608,400 lbs. in No. 2½ cans.

Cherries, Fancy, Type I (a): 9,269,000 in No. 10 cans and 606,000 in No. 303 cans.

Apricots, Fancy or Choice, Style 1a: 6,560,400 lbs. in No. 10 cans, and 1,285,000 in No. 2¾ cans.

Peas, Fancy or Extra Standard, Type I Early or II Sweet: 22,695,000 in No. 10 cans and 1,577,000 in No. 303 cans.

Tomato Washing Study

Research Laboratory Report No. 56 – "21 Studies on Tomato Washing Operations," by W. A. Merver and W. W. Rose, is now available from the National Canners Association Berkeley Laboratory, 1950 Sixth St., Berkeley 10, Calif.

This report gives the results of a continuing investigation whose objectives include: 1. Conservation of water through more efficient use of product waste water; 2. prevention of spoilage or other sanitation problems, resulting from improper use of fresh or reclaimed waste waters; and 3. accumulation of information as a basis for suggesting improvements in the design of product washing equipment.

Cherry Harvest

(*Continued from Page 28*)

gan State. Each plant has a quality control laboratory, under the direct supervision of the plant superintendent. Technicians run the usual tests during the pack.

The key to the quality control system seems to be the function of Mr. Erickson in a staff position and not directly connected with the routine of the operational side of quality control.

Big Plants

Diversification is another important factor in the success of Michigan Fruit Canners, Inc. In the Benton Harbor plant, which has become the most diverse of the three, the season runs from asparagus to apples.

Here is the list: asparagus, rhubarb, strawberries (not in 1957, however), gooseberries, red raspberries, black raspberries, sweet cherries, red sour cherries, blackberries, tomato juice, free and cling peaches, bartlett and kieffer pears, crabapples and apples for slicing.

Frequent Shifts

The arrangement of processing lines is such that two operations can be shifted rapidly or in some cases run simultaneously. For example, the shift from red cherries to sweet cherries to berries is made easily and frequently during the season. Lines are compact. The tomato juice line, particularly, turns out a tremendous volume, but takes very little space in the plant.

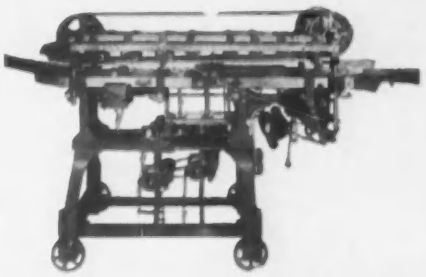
Much of the machinery used in the plant is engineered and often constructed by the company.

Spotlight

(*Continued from Page 12*)

cases of canned peas and 140 million lbs. of frozen peas were produced in the area representing 24% of the nation's canned peas and 39% of the total U. S. pack of frozen peas.

ELIMINATE LOST TIME WITH A BURT NON-STOP LABELER



Burt Labelers save time . . . by operating continuously. There are no time-consuming stops to replenish the label supply. The Burt Dual Label Feed means that the operator is never rushed.

EXCLUSIVE BURT FEATURE
Auxiliary Feed Fingers function from both sides of the label, assuring uniform label position, with no disarrangement of the label pack.

BURT MACHINE COMPANY

401 E. Oliver Street
Baltimore 2, Maryland

The Market Place

News of Promotion and Selling

Butter Beans

College Inn has introduced a specialty product to its line – large California butter beans with molasses and bacon added for flavor.

A staple item – fancy red beans – has also been added to the firm's line.

Both products have been market-tested in several cities, according to the company.

Recipe Book

The National Preservers Association has announced publication of a 32-page recipe book, featuring a collection of food editors' favorite recipes, each one calling for the use of fruit spreads as a key ingredient.

The two-color illustrated booklet includes a brief biographical sketch of the food editor whose favorite recipe is printed.

Copies are available at 10c each from the National Preservers Association, 1346 Connecticut Ave., N.W., Washington 6, D. C.

Private Mold Jars

The Phillips Company, Chicago, has adopted two new private mold glass jars for the packaging of its line of jellies and preserves. Illustrated here are 10-oz. jars of strawberry preserves, grape jelly and mint-flavored apple jelly; and 12-oz. jars of grape jam, strawberry preserves and pineapple preserves.

"Fluffy Fruit Pie"

Carnation Company's "Fluffy Fruit Pie" promotion features 11 high-markup items. In addition to Carnation evaporated milk, Gold Medal flour and Spry shortening, the drive highlights maraschino cherries, crushed pineapple, pineapple juice, fruit gelatin, prune juice, grape juice, applesauce, apricot nectar, apple juice and fresh, frozen or canned orange and lemon juice.

Grocers have been provided with colorful posters, recipe pads and shelf talkers as aids to the promotion.

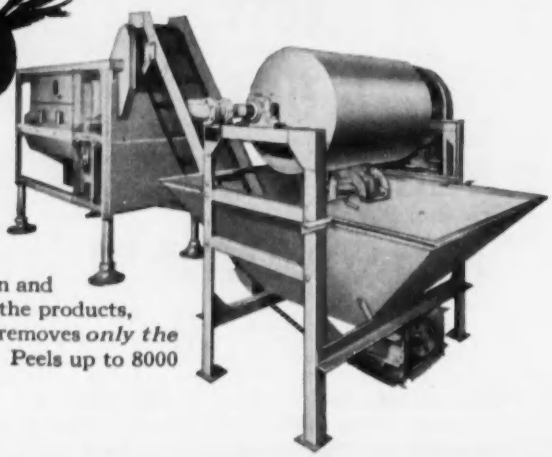
Canned Salmon Week

August 23-30 has been set aside this year as National Canned Salmon

EASY WAY TO SKIN 'EM FAST—*at less cost!*

THE *Robins* STEAM PEELER

(formerly manufactured by the Pfaudler Co., Rochester, N.Y.)



By utilizing this method of peeling root vegetables—steam contour peeling—the Robins Steam Peeler brings you many new economies in terms of increased production and lower labor costs. No matter how irregular the shape of the products, the Robins Steam Peeler quickly and easily skins them . . . removes *only the skin* to eliminate product waste and cut trimming costs. Peels up to 8000 lbs. per hour, depending on product.

Let a Robins representative show you what a valuable asset the Robins Steam Peeler can be to your production line. Just give him a call . . . he'll explain its many advantages, operation, and construction features. Or, for full information, wire or write direct to:

A.K.Robins AND COMPANY, INC.

Manufacturers of Food Processing Machinery Since 1855

713—729 East Lombard Street • Baltimore 2, Md.

Week, sponsored by the Association of Pacific Fisheries.

ROP color pages in leading newspapers will be used and food editors of newspapers, television and radio have been alerted to the week with timely canned salmon recipe material.

This is the first time that the canned salmon industry has observed the special week in summer. It will coincide with the arrival of the new packs of canned salmon from Alaska, Columbia River and Puget Sound canneries.

Kraut Salad Season

The National Kraut Packers Association is presenting new and appetizing recipes for kraut salads to the consumer through a national summer publicity program.

The Association is reminding grocers that kraut returns an average retail profit margin of 24%, and is urging them to display kraut with dressings in the produce section for added impulse sales.

Courtesy Owens-Illinois

Streamlined Container

The new, streamlined jar adopted by Crosse & Blackwell Co., Baltimore, Md., for its preserves, has a diamond-studded design at the heel to add a decorative touch to any table setting. The product is distributed nationally.

Taped Can Suit Advances

The suit by Chun King Sales concerning infringement of patent suit against Oriental Foods, Inc., may reach the U. S. Supreme Court. According to Jeno F. Paulucci, president of the Duluth, Minn. firm, Chun King attorneys will consider an appeal of the Court of Appeals decision that held invalid the patent infringement of its suit on the taping together of cans.

A U. S. District Court's decision held that the Chun King patent is valid. It was recently reversed by the higher court. The Minnesota company claims that the taped can has become closely associated with Chung King.

Help for Growers

The National Association of Food Chains quoted a part of the apple growers' request for applesauce promotion in its announcement of the July promotion schedule. "Past experience indicates that a large August 1 carryover is the most powerful factor in establishing the price growers received; hence, our acute concern over the present prospect," growers said.

If the June and July movement could be increased to 50% over early spring sales, the growers would be in good shape by August. An increase of 50% was not impossible, in view of the NAFC's record, growers said.

REDUCE
Handling COSTS
ABC
PICKING
BOXES

- PALLETIZE
- STACK EVENLY
- AUTOMATIC DUMP
- REDUCE BRUISE DAMAGE
- HAVE LONG LIFE
- SAVE SPACE

Your orders are assured immediate service by ABC's vast forest, sawmill and factory facilities.

Write for brochure on mass production and automation handling methods with wooden picking boxes—no charge.

American Box Corporation

2740 HYDE ST. SAN FRANCISCO 19, CALIF.

Washington and You

Supreme Court Decisions Raise Merger Questions

An increasingly popular sport in Washington, D. C. is figuring out the next move of the Supreme Court. The nine justices, who have quit for the summer after a few weeks overtime on the Army's Girard case, have left in their wake puzzled lawyers – by the building-full.

The worrying goes on among the corporation counsels of New York City, as well as among the anti-trust watchdogs in the Department of Justice. The reason for this concern?

A series of decisions have upset the traditional legal thinking of decades. Several new members are on the court whose ideas and possible leanings cannot be predicted as readily as the older members. And there is a strong possibility that the court may change even more in the coming year – but in which direction?

One of the questions is how the court will react to merger problems.

Canners will watch the attitude of the court toward the combining and merging in the container industry. During the past year there has been some indication that the Department of Justice was not entirely satisfied with developments in the container field.

But even the recent history of anti-trust decisions by the Supreme Court is twisted.

In one decision conerning the manufacturer of a transparent packaging film, the decision was to the effect that an illegal monopoly situation did not exist because this type of packaging was basically in competition with every other type: cans, cardboard, and the like.

Then, only a few months later, came the du Pont decision on General Motors. The chemical corporation must sell all its stock in the automobile giant.

While the two cases are entirely different, the change in temperament from the first decision to the second is noticeable even to a layman. To a lawyer it is inexplicable.

One merger suit already in the toils of the Department of Justice may climb the distance to the Supreme Court bench even during the next season. The arguments are that if Justice Black retires (he has been consistently liberal) and Justice Burton retires (he has been consistently conservative) and Justice Whittaker begins a more active role (he joined the court late in the term and heard few of the arguments on the more controversial decisions) the temper of the entire court may change. And what will it be?

What Is Not Poisonous?

Hearings before the subcommittee of the House Committee on Interstate and Foreign Commerce on the food additive bills have tried to separate necessary red tape from the definitely harmful effects of government regulation.

Lawrence Coleman, on behalf of the Manufacturing Chemists Association, pointed out that while some chemicals can be easily labeled as "poisonous," the idea is inaccurate that a food substance can always be branded as either "poisonous" or "not poisonous" without an expression of quantity.

Mr. Coleman also spoke sharply against points in the Administration's bill on additives. The licensing provision would allow only additives used which the U. S. Food and Drug Administration had approved. Mr. Coleman felt that this provision would seriously limit advancement in technology. He also said that the procedure for appealing a denial of a license was unfair to the individual.

Meat Packers' Problems

Neither of the two regulatory battles that the meat packers are carrying on are going very well. On the judicial front the request for a modification of the 1920 consent decree, which would allow four big packers to broaden their fields, has met determined opposition from the Department of Justice.

On the legislative side the disagreement is on whose watchdogs are better, the Federal Trade Commission or the U. S. Department of Agriculture. This one is stymied for the moment. The bills in Congress to transfer the policing functions of the USDA to the FTC probably will not move during the present session. The gain in time is probably a gain for the meat packers. Many of the charges against the packers and against the USDA enforcement of fair trade practices are distorted.

The American Meat Institute has published a booklet arguing – not against the FTC but for the USDA. It notes that the 10 large meat packers have been charged with handling 70% of the meat business. Not true, said the American Meat Institute. The figures are different for each slaughter, but the average is closer to 48%.

The percentage for the top four companies has been going down instead of up for the past 20 years.

"OLD MAN SUMMER"

HAS ARRIVED WITH

BUGS & INSECTS—DUST & DIRT

RESISTANT TO OILS ACIDS ALKALIS AND MOST ACIDS

NO SEWED SEAMS TO ROT OR RIP

How about "LITE-KOTE" Kovers for Pickles, Sauer Kraut, Vinegar, Babyfood, Fruits & Vegetables.

(Specialty sizes available)

ROBIN W. ADAIR CO., INC.

Write Raco Products Division

Avoca, N. Y. Tel: 2227-28

it sets a man to thinking!

"Flavor Improvement, New Products, Product Development—what I would have given for that kind of help when I started this business.

"Come to think of it an outside evaluation of flavor might be a smart move for us. Then if our product has become a little old fashioned, we will find it out before decreasing sales tell us.

"Guess we should check with them on Product Development, Eye-Appeal, New Product Suggestions, too. We've known the Stange name for years so—like they suggest—perhaps we'd...better check with Stange and be sure."

The **WM. J. STANGE CO.,** *Manufacturers of Seasonings and Food Colors, extends to the Food Industry a three-fold service involving Flavor and Color Improvement—Product Development—New Product Suggestions. Any or all three services are available through a Stange representative or by letter.*

50-A MICROGROUND SPICE CREAM OF SPICE SOLUBLE SEASONING GROUND SPICE
NDGA ANTIOXIDANT PEACOCK BRAND CERTIFIED FOOD COLOR

WM. J. STANGE CO.

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Litho in U.S.A.

Color Standards

(*Continued from Page 20*)

calibrating the photometer scale on the Agtron colorimeter.

In actual practice, the ratio is measured directly for cut half tomatoes and converted for reading as a grade number.

In California, the plastic color standard is the basis of standardization for all tomato grading. Any tomato canned in California must by law be judged in comparison with the plastic standard. A tomato which does not pass the test cannot under any circumstances be canned. This inspection is, of course, done on a sampling basis. Its purpose is to maintain California's reputation for quality tomatoes in the Eastern market.

Peach Yellow

The problem in peaches was to develop a standard color for visual comparison of fresh cling peaches. Prior to this, in the California Department of Agriculture, inspectors of the Cling Peach Advisory Board had to remember from previous seasons the minimum outside *skin* color considered satisfactory for some 20 or more different varieties, each with a different skin color. To complicate matters, each single variety shows characteristic skin-color differences in one peach. More recently, it was proposed that the color of the flesh of the peach would be considerably freer of these variations. Accordingly, in mid-1952, it was suggested that molded polystyrene color disks be made to match "minimum ripe flesh color" and "medium ripe flesh color" designated at first as Maerz and Paul[1] colors, 10-K-3 and 9-L-6 respectively. These particular colors had been used for this purpose by the U. S. Department of Agriculture.

The prolonged effort which followed reveals some of the difficulties in this work in developing standards acceptable to a large number of inspectors at a variety of installations.

In comparing reflectance curves of these Maerz and Paul plates with those recorded for a wide variety of representative peaches, major differences were found. Differences between varieties of peaches were much less than those between the Maerz and Paul colors and any real peach color. These differences are such that color differences between these plates and real peach flesh are "metameric". This means that the direction and magnitude of the color difference change as the type of illumination is varied. Furthermore, it is evident that peach flesh has a characteristic depth of color not obtainable in these printed paper standards.

Against this background, several attempts were made to create, in polystyrene molding powder, color matches for the specified Maerz and Paul color standards under specified illumination. The colorants used in the polystyrene were chosen so that their combination would produce spectral reflectance curves simulating as closely as possible those of representative peach flesh. On the other hand, it was attempted to match the colors of the given standards under specified illuminants.

Peach inspectors had gained experience in working with Maerz and Paul color and any major change from them was best avoided to facilitate use of the polystyrene standards.

Reflectance curves for the plastic standards and the peach variety were closely matched. The chlorophyl absorption band at 680 m_{μ} in the latter, is omitted in the plastic standard but the remaining portions of the reflectance curves are quite similar.

By September 1952, other matches had been developed in polystyrene for what was now known as "ideal" and "minimum" acceptable peach colors.

In May 1953, agreement was reached among growers, processors, government officials on the "minimum acceptable" peach color. No previous polystyrene match was entirely satisfactory so the development of a better visual match was renewed. A color match was developed containing cadium sulfide pigments, synthetic iron oxide and titanium dioxide. In addition, precipitated barium sulfate pigment was used to reduce the gloss of the polystyrene standard to better approximate that of freshly cut peach flesh.

A production order for fifteen thousand "minimum acceptable peach color" standards have been in continuous use since they were purchased and no changes are contemplated in their use in the future. Their use has been confined to visual comparisons by inspectors only. The total California pack is required by law to be graded in comparison with the plastic standards.

Lima Bean Green

The development of a standard for frozen lima beans was somewhat simpler. The problem was restricted to developing polystyrene matches for a number of Maerz and Paul color standards (18K5, 18J3, 18E1). These were the USDA grade standards for this product.

These paper standards had been encased in acrylic plastic to preserve their fidelity of color. In developing these matches, metameric color-differences were minimized by careful selection of colorants to simulate the reflectance curves of the Maerz and Paul samples. Careful visual comparison of samples also were made under a Macbeth Illuminator. The final formulation contains titanium dioxide white, cadmium yellow, synthetic iron oxide and phthalocyanine green to simulate to some degree the chlorophyl absorption band.

New Standards

The USDA has amended the grade standards for frozen lima beans to eliminate the reference to color plates in Maerz and Paul's Dictionary of Color; also the newly developed permanent polystyrene color comparators were specified for classifying the color of frozen lima beans.

The Federal inspection is not a mandatory legal requirement but instead is a service offered to establish quality grades in foods so that their value may be determined when they enter into commerce. There is no question of whether or not the produce will be kept off the market if low in grade, unless, of course, quality is so low that the Food and Drug Administration considers it unfit for human consumption.

Further Development

The examples described here are only part of a continuing project to improve color evaluation in the many grade standards developed by the Federal and State Departments of Agriculture for processed fruits and vegetables and other food products. Most recently, Pimiento Red and Pimiento Yellow standards have been developed. In addition, to demonstrate the unusual possibilities in completely instrumental inspection, a series of achromatic gray standards has been developed for a filter photometer system of grading any specified food color. The principle here is that, with carefully selected instrumental conditions and with adequate confidence in their utility, one can eliminate entirely the need for visual judgments and color-standards which simulate the color of the foods being inspected. It is clearly recognized that this development is a highly advanced one, and one which will undoubtedly require considerable time to develop confidence and acceptance in the food processing industry.

Reference:

1. Maerz, A. J., and Paul, M. R. "A Dictionary of Color," 2nd ed. New York, McGraw-Hill, 1950.

Libby Plant

(*Continued from Page 21*)

packaging machines) register "on" or "off" on the panels.

Three probes in the filler hoppers signal level of peas on panel board:

1. Peas hit all three probes. Red light is on.
2. Peas hit medium and low probe. Red and green lights are on.
3. Peas hit only low probe. Amber and green lights are on.
4. No peas. Amber light is on.

Filling Line Speed

The speed of the entire line is set by the speed of the fillers and closing machines. The panel operator notes trouble on the board by a red light that flashes on when a closing machine stops. In a few minutes the filler above the hopper feeding to that line will show the red light for "full."

The supervisor on the second floor shuts a manifold on one of the channels and phones the central panel operator. The central panel has a register, manually operated, which records the channels that are open.

If it seems necessary, twist of a dial by the central panel operator will slow the bucket elevator.

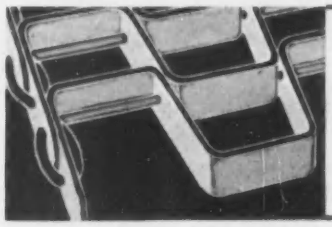
Palletized Pea Boxes

For the most part, the Wallaceburg plant is a typical pea plant. The peas are brought in from the 22 field viners in palletized lug boxes, unloaded by lift truck and dumped by hand into the receiving bins. The bucket elevators elevate the peas to cleaners. Peas are washed, blanched, pumped to the quality grader and flumed to the picking tables. Flumes carry the peas to the filling machine hoppers. Closing machines feed into crates for the horizontal retorts and directly to two continuous cookers.

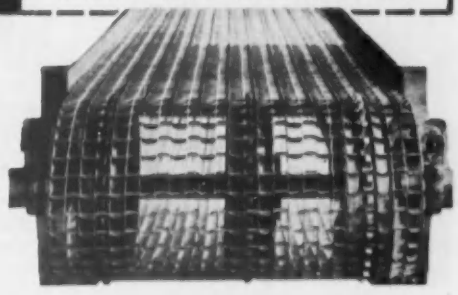
Peas for freezing taken in at one elevator are sent through the blancher at pre-determined time and temperatures.

Equipment in the Libby, McNeill and Libby of Canada, Ltd. plant at Wallaceburg, Ontario and manufacturers:

Controllers—Taylor Instrument Co.
Dry cleaner—Chisholm-Ryder Co.; Huntley Mfg. Co.
Washers—Key Equipment Co.; Scott-Viner Co.
Blancher—Food Machinery & Chemical Corp.; Berlin-Chapman Co.
Quality graders—George J. Olney
Continuous cookers—Food Machinery & Chemical Corp.
Horizontal Retorts—Horizon Canners Machinery Co.
Labeler—Burt Machine Co.
Caser—Food Machinery & Chemical Corp.
Pumps—Scott-Viner Co.
Brine Maker—Morton Salt Co.



Engineered
for EVERY Process
LA PORTE
FLEXIBLE STEEL CONVEYOR BELTING



Food moves smoothly through freezing, cooking and dehydrating processes on this all-process conveyor belting that costs less, wears longer, and requires less maintenance.

The open-mesh construction assures a positive drive on the sprocket, provides for fast drainage, permits free circulations of air around products in process, prevents waste accumulation, protects your products against odors and off flavors, and makes sterilizing with a steam gun or scalding water simple and easy.

If you process, package, ship, or store food products this is the belt for you. Available in ½" x 1" also 1" x 1" in any length and practically any width.

LA PORTE

Ask your Mill Supplier or write for illustrated literature, prices.

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MALT VINEGAR

Full Bodied
Fine Flavored

IN COOPERAGE, TANK CARS, OR TANK TRUCKS

A. M. RICHTER SONS CO.
Manitowoc, Wisconsin
Since 1875
All Types of Vinegar

LOOK

AT YOUR LABEL
Everyone else does!
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Letters

Information on Financing

To the Editor: Articles appearing in your publication have been recommended to me from time to time by several of your subscribers who are our good customers.

At the present time I am attempting to write a thesis covering bank financing of the frozen food industry. The thought came to mind that possibly your organization has in its files information which I could use in writing this thesis. I am contacting several publications such as yours attempting to get all available material so that a wide range of views and information will go into the thesis.

If you have any information which you could send to me or which you could let me use for a period of about 30 days, I would certainly appreciate it.

If you or any of your staff have any ideas or points of interest that should be brought out in the thesis, I shall be most happy to have you or them drop me a line.

Jack B. Donaldson
First National Bank
Memphis, Tenn.

Who Makes Field Machinery?

To the Editor: Would you kindly forward to me the address of the manufacturers of the vegetable harvester, JCL Mfg. Co., and the air-blast sprayer described in Food Packer October, 1956. The article was by Dr. Wilbur Gould concerning new machinery shown at the Ohio Canners Field Day.

M. C. Ginther
Bryan, Ohio

The JCL Manufacturing Co. is located at Arcanum, Ohio. The sprayer shown at the Ohio Field Day was one used for experimental purposes by the USDA engineering laboratory at 3620 River Road in Toledo. Frank Irons, who is head of the engineering staff, has been working with the John Bean Equipment Co., in developing an air-sprayer for use on row crops. (See article July, 1957, Food Packer.)

Buy Machinery To Make Mistakes?

Mistakes are the reason for investing money in a pilot operation. Dr. Gould's advice is "make your blunders on a small scale, your profits on a large scale." — See Page 22.

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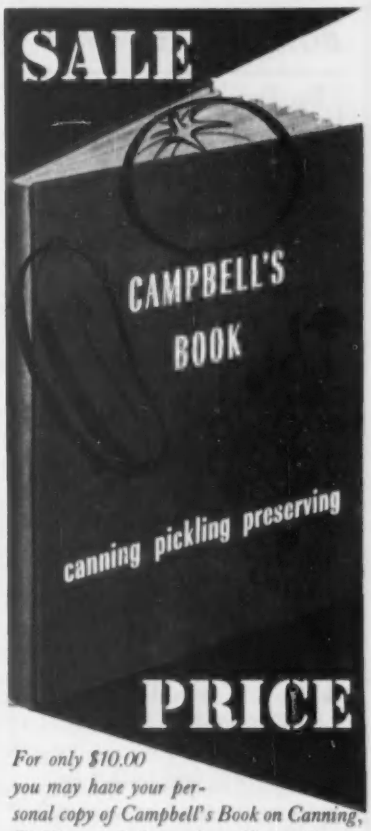

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Man of the Month

Talcott T. Hopkins

Vice President and General Manager
Seed Division
Rogers Brothers Seed Company

The field of pathological genetics has had a profound effect on canning as well as on every other agriculture-based industry. Plant breeding has provided varieties with characteristics for hardiness and resistance against specific diseases.

Plant breeding, of course, has also improved size, yield and quality of vegetable and fruit crops. The words, "canning and freezing varieties," have become important additions to the vocabularies of the processing industries.

And still, despite the gains, pathological genetics is a science in its infancy. Thirty years ago it was practically unknown in the field of vegetable crops.

Hopkins Starts With Peas

In June 1928, Talcott Hopkins, a graduate of Botany and Technical Agriculture from the University of Wisconsin, joined the Rogers Brothers Seed Company. He was one of the first men to bring the new breeding techniques to the commercial vegetable field. He was instrumental in revamping the breeding and production programs of peas and beans at Rogers Brothers, and he established the first pathological genetics program commercially for peas. The pea program was originally patterned to combat Fusarium Wilt.

The more technical parts of his work with peas and beans, now world-known, have come from the intensive work of Dr. M. E. Anderson, who was employed by Mr. Hopkins for Rogers Brothers in 1932.

This very early effort, incorporating a new science, has been a major factor in establishing leadership for Rogers Brothers in the field of progressive breeding and development of peas, beans and corn.

Through the efforts of Mr. Hopkins, many of the major varietal and production problems of the food processing industry have been overcome.

"T. T." or "Bud" Hopkins is now vice president and general manager of the Seed Division of the Rogers Brothers Seed Company and is spending much of his time in the development and promotion of the company's new production and sales management.

Wisconsin and Idaho

Mr. Hopkins was born in Sturgeon Bay, Wis., in 1903. He is the third generation of one of the country's oldest seed families. He moved to Idaho in 1911. For a short time after his graduation from college he worked for the John H. Allan Seed Company.

Bud Hopkins knows the canning industry. His activities have ranged far outside his research studies ever since his first days with Rogers Brothers. During the depression years he traveled extensively for the company in its eastern territory. He developed at that time what is still an outstanding characteristic, photographic memory of names and faces.

Political Interest

Another characteristic, perhaps not so well known, is Mr. Hopkins' deep and active interest in American politics. He was one of President Eisenhower's earliest and strongest western supporters. According to his associates, he is primarily a Republican, but will cross party lines if the proper candidate is called. While he has never sought a public office he has continually looked for better men to fill political offices and has supported them as time would permit.

Mr. Hopkins was married in Los Angeles in January, 1925 to Zoe Erbe. They have three grown sons, all veterans. Two of them are married and the youngest is a student at Stanford University. Mr. and Mrs. Hopkins have three granddaughters and two grandsons.

T. T's billfold bulges with club cards. He is a member of the B.P.O.E., and AF & AM in Idaho Falls. He is a Shriner, a Rotarian and president of the Idaho Knife and Fork Club. He is a 32nd Degree Mason. He is a member of the National Canners Association's Technical Advisory Committee on Raw Products. He has held many positions on professional seed and plant breeding organizations. He is active in local civic groups.

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